

The men behind the antitrust drive

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BUSINESS WEEK

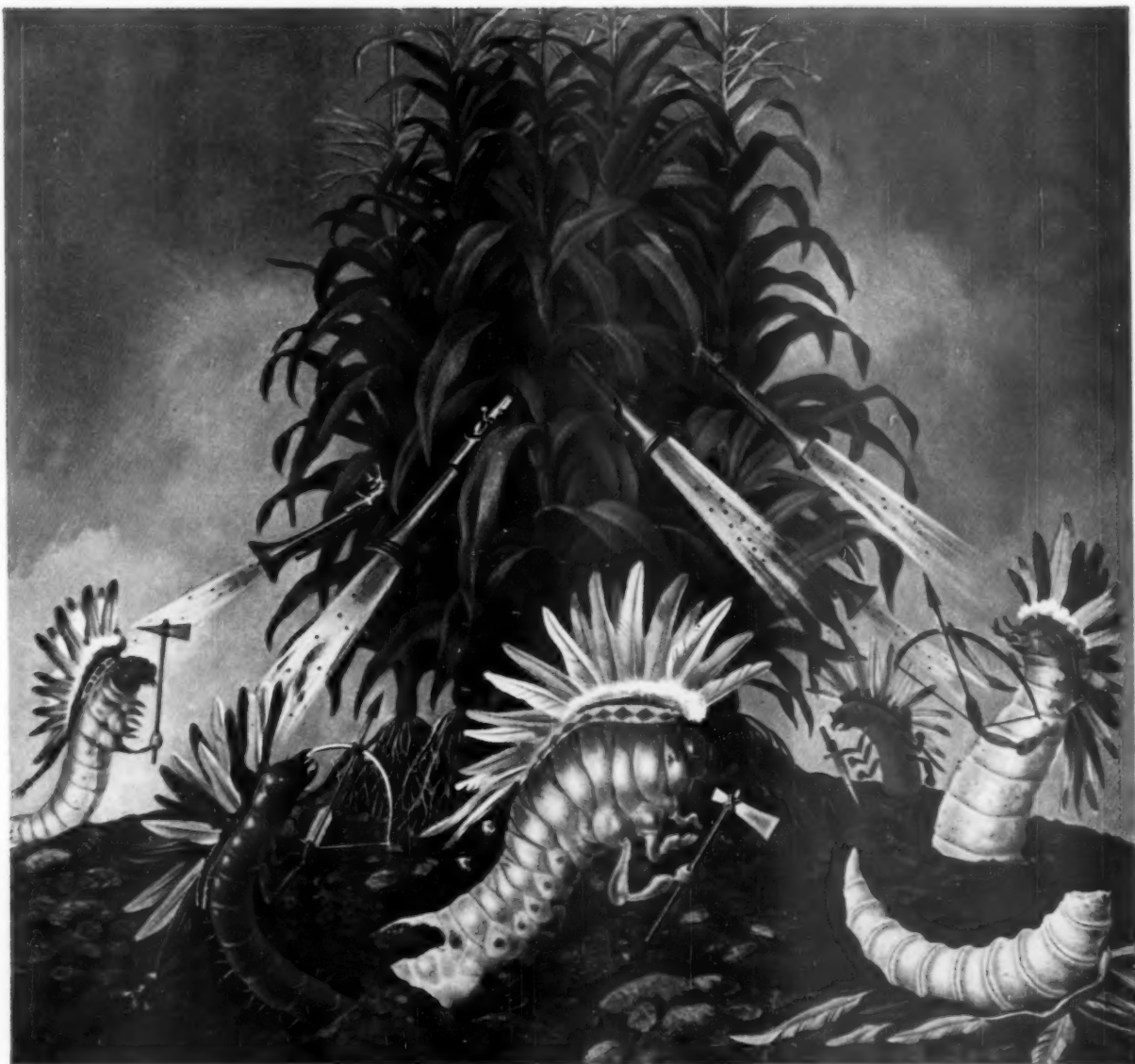
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MARCH 14, 1959

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ONCE a cornfield was helpless prey to marauding soil pests. But now they've met their match and more in Shell Chemical's insecticide, *aldrin*.

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tected feeder roots make bigger corn; cornstalks stand up against wind and storm. At harvest time they reach straight for the sky for efficient mechanical picking.

Providing "a firm stand" for corn and other crops by protecting roots from soil insects is one of the many ways Shell Chemical serves the farmer.

Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

NEW YORK



IN BUSINESS THIS WEEK March 14, 1959

GENERAL BUSINESS

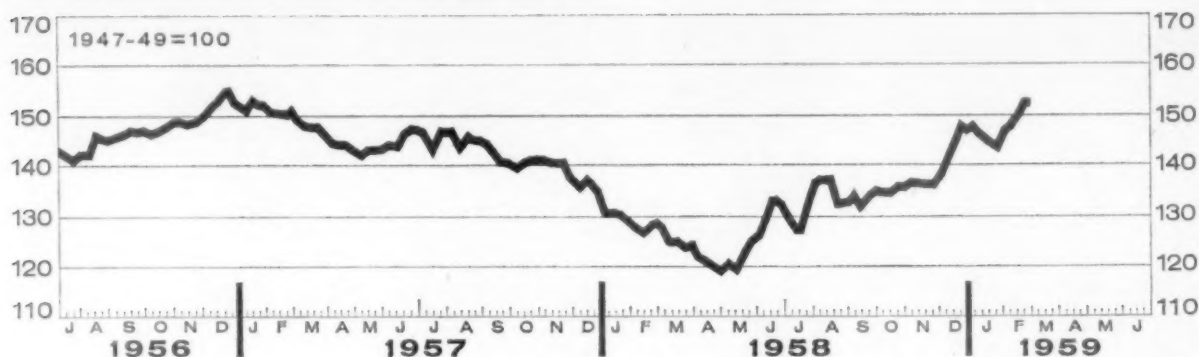
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PRODUCTION

	1946 Average	Year Ago	Month Ago	Week Ago	\$ Latest Week
Steel ingot (thous. of tons).....	1,281	1,463	2,371	†2,556	2,600
Automobiles and trucks.....	62,880	108,322	148,328	†162,728	166,316
Engineering const. awards (Eng. News-Rec. 4-wk. daily av. in thous.).....	\$17,083	\$57,453	\$65,053	\$67,535	\$68,661
Electric power (millions of kilowatt-hours).....	4,238	11,793	13,292	12,972	12,945
Crude oil and condensate (daily av., thous. of bbls.).....	4,751	6,328	7,213	7,199	7,213
Bituminous coal (daily av., thous. of tons).....	1,745	1,385	1,431	1,343	1,366
Paperboard (tons).....	167,269	265,719	298,371	301,751	315,717

TRADE

Carloadings: mfrs., miscellaneous and l.c.l. (daily av., thous. of cars).....	82	55	57	58	59
Carloadings: all others (daily av., thous. of cars).....	53	37	40	39	40
Department store sales index (1947-49 = 100, not seasonally adjusted).....	90	107	106	109	118
Business failures (Dun & Bradstreet, number).....	22	358	271	296	288

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	398.3	384.6	382.8	386.6
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	††73.2	83.2	89.2	88.4	89.1
Foodstuffs, daily index (BLS, 1947-49 = 100).....	††75.4	86.9	78.1	78.6	79.2
Print cloth (spot and nearby, yd.).....	17.5¢	17.4¢	18.4¢	18.5¢	18.5¢
Finished steel, index (BLS, 1947-49 = 100).....	††76.4	181.7	187.0	187.0	186.9
Scrap steel composite (Iron Age, ton).....	\$20.27	\$37.67	\$43.83	\$41.83	\$41.17
Copper (electrolytic, delivered price, E & MJ, lb.).....	14.045¢	24.185¢	30.000¢	30.090¢	30.985¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.22	\$2.02	\$2.02	\$2.04
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	34.53¢	34.26¢	34.33¢	34.26¢
Wool tops (Boston, lb.).....	\$1.51	\$1.70	\$1.62	\$1.61	\$1.62

FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 10).....	17.08	42.24	54.29	55.82	56.29
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	4.67%	4.90%	4.88%	4.87%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	2%	¾%	¾%	¾%

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	54,503	57,540	57,070	56,206
Total loans and investments, reporting member banks.....	††71,916	88,576	94,061	93,857	93,784
Commercial and agricultural loans, reporting member banks.....	††9,299	30,241	30,154	30,258	30,301
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	27,707	31,954	30,825	30,627
Total federal reserve credit outstanding.....	23,888	24,309	27,092	26,925	26,892

MONTHLY FIGURES OF THE WEEK

	1946 Average	Year Ago	Month Ago	Latest Month
Housing starts (in thousands).....February.....	55.9	66.1	86.0	89.0
Employment (in millions).....February.....	55.2	62.0	62.7	62.7
Unemployment (in millions).....February.....	2.3	5.2	4.7	4.7
Average weekly earnings in manufacturing.....February.....	\$43.82	\$80.64	\$87.38	\$87.16
Wholesalers' inventories (seasonally adjusted, in billions).....January.....	\$5.5	\$11.9	\$12.0	\$11.9
Retailers' inventories (seasonally adjusted, in billions).....January.....	\$9.8	\$24.5	\$24.0	\$24.1
Retail Sales (seasonally adjusted, in millions).....January.....	\$8,541	\$16,718	\$17,605	\$17,453
Exports (in millions).....January.....	\$812	\$1,505	\$1,514	\$1,400

* Preliminary, week ended March 7, 1959.
† Revised.

†† Estimate.
** Ten designated markets, middling 1½ in.

‡ Date for 'Latest Week' on each series on request.

THE PICTURES—Cover—Gene Pyle; 29—Petrocelli; 32, 33—Grant Compton & Herb Kratoch; 47, 48—Noel Clark; 61—Pictorial Parade; 66, 69, 70—McGraw-Hill World News; 72—McGraw-Hill World News; 77—(bot. lt.) M.I.T., (top. cen., & bot. rt.) Gene Pyle; 78, 79—John Coney; 88—U. S. Steel; 97—Ed Malsberg; 106—General Dynamics; 116, 117—Joern Gerds; 130, 131—Gene Pyle; 140-141 (map) Frank Ronan, (top lt.) Dole, (top rt.) U. S. Coast Guard, (bot.) Black Star; 142—Pepsi-Cola; 144—Dept. of the Interior; 161—Grant Compton; 163—(lt. & cen.) Grant Compton, (rt.) Archie Liberman; 183, 184—Tuza Wilson; 195—Martin Co.



Photo courtesy G. & W. H. Corson Inc., Plymouth Meeting, Pa.

Hurrying upstairs with a mountain of rocks

B.F. Goodrich improvements in rubber brought extra savings

THOSE rocks are on their way to the top of that building. But getting them way up there was once a problem. The angle is too steep for a regular, smooth-surfaced conveyor belt. The rocks would have tumbled back down faster than the moving belt could carry them up. It looked for a time like the incline angle would have to be reduced; a longer, more expensive conveyor used.

But after discussing it with a B.F. Goodrich distributor, plant engineers decided to try a special kind of con-

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Your B.F. Goodrich distributor has the exact specifications for the B.F. Goodrich conveyor belt described here. And, as a factory-trained specialist in rubber products, he can answer your questions about *all* the rubber products B.F. Goodrich makes for industry. B.F. Goodrich Industrial Products Company, Dept. M-551, Akron 18, Ohio.

B.F. Goodrich *industrial rubber products*



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BUSINESS WEEK • Mar. 14, 1959

READERS REPORT

Pension Fund Report

Dear Sir:

. . . I should like to congratulate you on this article [Special Report on Pension Funds] (BW—Jan. 31 '59, p87). It is one of the best I have seen published to date by a well known magazine. You have accumulated and reduced to writing a great many of the economic and social factors involved in the subject of gerontology that I, and others in this field, have been sounding off about for years.

I am pleased to see that a magazine of your stature has the intelligence to place before the public some of these startling facts. For example—as I am sure you realized when you wrote the article, the total cost of providing pensions in the U.S.A. is now exceeded only by national defense expenditures . . .

G. WARFIELD HOBBS

VICE-PRESIDENT

THE FIRST NATIONAL CITY BANK OF
 NEW YORK
 NEW YORK, N. Y.

Dear Sir:

. . . I found your article on pension funds of particular interest because I was named as Chairman of the Senate Subcommittee on Securities a short time ago. The paragraphs describing the effect of pension programs on finance and the stock market were particularly helpful.

HARRISON A. WILLIAMS, JR.
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Dear Sir:

I want to compliment BUSINESS WEEK on the excellent Report.

. . . You have performed an important public service by this most helpful and illuminating analysis of an important matter that "just grew" without many people being aware of its size until your report came along.

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. . . It has a great deal of interesting material, some of which is new to me though I have kept fairly abreast of the subject. I am glad that you made the subject of more general knowledge . . .

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PRESIDENT, PACIFIC MUTUAL LIFE
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LOS ANGELES, CALIF.

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readers such an exhaustive study of a most important subject.

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TREASURER
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GREENSBORO, N. C.

Dear Sir:

. . . An excellent job . . .
PAUL W. WATERMAN, JR.
VICE-PRESIDENT
SECURITY-FIRST NATIONAL BANK
LOS ANGELES, CALIF.

The Boykin Bill

Dear Sir:

Your Price Cutting . . . [BW—Jan. 31 '59, p. 45], summarizing the drastic steps being taken by manufacturers to stabilize prices, was interesting and informative as far as it went. By stopping so short, you deprived your readers of information about a simple, effective, and fully constitutional solution.

The answer lies in the enactment of the Boykin Quality Stabilization Bill, H. R. 2463. The Bill is founded on a solid and thoroughly tested basis, the unanimous U. S. Supreme Court decision that a manufacturer's property rights in his brand, name, or trademark are not altered by the sale and transfer of the product itself.

The Bill provides that a reseller may employ the owner's brand, name, or trademark, but only in effecting the resale of goods bearing such identification. . . .

MARTIN WIERSMA
DIRECTOR, PUBLIC RELATIONS
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GARY, IND.



PROFITABLE SALES TOOL

Long Distance starts earning money for you right away!

Just pick up the phone already on your desk and place calls to your out-of-town prospects. Tell them what you have to sell—answer their questions—ask for the order.

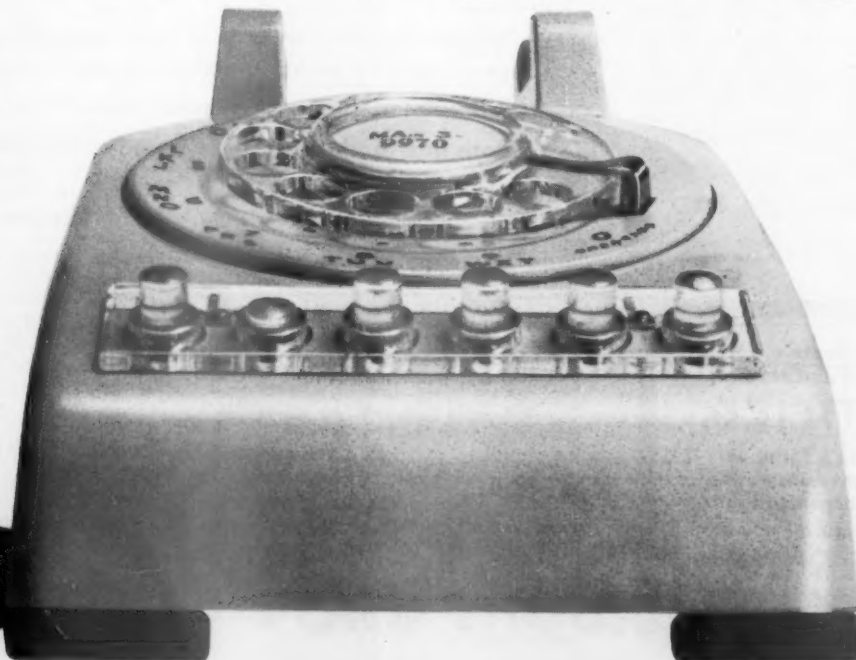
Or it can work the other way around. Let your out-of-town customers know they may call you *collect* whenever they're ready to order, and the sales seek you.

Either way, you get results at once.

A wholesale hardware company serving three states pasted "Call Collect" stickers on all outgoing invoices. One dealer, for example, called collect to place an order worth \$1050.97. The call cost the wholesale hardware company only 95 cents!

BELL TELEPHONE SYSTEM

LONG DISTANCE PAYS OFF! USE IT NOW... FOR ALL IT'S WORTH!



NOW! CERTIFIED PROOF—FORD TRUCKS COST LESS...

'59 Ford Trucks Win — average 25.2%



'59 Ford pickups running one of the Economy Showdown courses set up by the research engineers. Like all the new '59 pickups tested, these are regular stock models with a standard six-cylinder engine, 3-speed transmission and standard rear axle ratio.

- Biggest comparison tests of truck gas mileage ever conducted by an independent research firm!
- Pickup models of all six makes tested in all kinds of driving!
- Both new and used trucks tested—534 units all told!

The difference between the right truck and the wrong truck can cost you *hundreds of gallons of gas* the first year alone!

A pretty startling figure? It's just one of many findings from the most far-reaching tests of truck fuel economy ever made.

These tests dug out the actual facts on gas mileage the only way they could be gotten—every truck pitted against its brother in an Economy Showdown.

To keep the tests fair and impartial, Ford Motor Company went to America's leading independent automotive testing firm. The project was outlined, the funds provided, and the Economy Showdown became solely the research organization's baby.

FIRST TESTS—NEW '59 TRUCKS

Standard six-cylinder models of the six leading half-ton pickups first were put through exhaustive road trials. All '59 trucks—Ford and competitive—were bought from dealers, just as you would buy them. After at least 600 miles break-in, all were brought up to manufacturer's recommended specifications.

The trucks were then tested at constant speeds of 30, 45 and 60 miles an hour. Next came stop-and-go tests, ranging from moderate city traffic to normal retail delivery operation. Acceleration rates were carefully timed in each gear to insure accurate results for all makes. Here are the results—certified by America's foremost independent automotive research organization.

All tests
conducted and results
CERTIFIED
by America's foremost
independent automotive
research organization*

*NAME AVAILABLE ON REQUEST.

Send inquiry to: P.O. Box 2687
Ford Division, Ford Motor Company
Detroit 31, Michigan

Economy Showdown USA *better gas mileage!*

CERTIFIED SHOWDOWN RESULTS

The '59 Ford Sixes, in every test, averaged more miles per gallon than every other make!

Combining all tests, the '59 Fords led the average of all other '59 pickups by 25.2%.

To put it another way, for every 1,000 miles driven, the '59 Fords gave an extra 252 miles gas free.

For the typical truck owner driving 10,000 miles annually, this would amount to a saving of 129 gallons of gas the first year alone.

WHAT'S THE SECRET?

How can a '59 Ford Six make four gallons do the work of five in other trucks?

First, of all pickup Sixes, only Ford has modern Short Stroke design. This new type of engine is basically far more efficient than the long-stroke Sixes of other pickups—most of which were born before World War II!

Second, to this modern engine Ford has added a new economy carburetor. By metering fuel more precisely in both low- and high-speed ranges, Ford's new carburetor boosts gas mileage in every type of driving. And it's standard at no extra cost.

WHAT SPEED GIVES BEST ECONOMY?

Economy Showdown tests reveal that, with any make truck, actual miles-per-gallon depend upon the kind of driving you do. In normal retail delivery operation, for example, gas mileage drops to less than half that obtained at a steady 30 miles per hour.

High speeds are hard on economy, too. At 60 mph, it takes 16 gallons to go the same distance that 10 gallons will take you at 30 mph.

You can't always tailor your driving to get absolutely maximum economy, of course. But of this you can be sure. No matter where or how you drive, no other leading truck will give you the gas savings of Ford's modern combination: Short Stroke Six plus new economy carburetor. Economy Showdown USA proved it!

Your Ford Dealer now has the full report of Economy Showdown USA. Why not call him today and get the whole story firsthand?

HOW NEW '59 SIXES RATE IN GAS MILEAGE

'59 FORD SIXES GIVE	25.2% more miles per gallon than Make "C".	31.1% more miles per gallon than Make "I".	9.6% more miles per gallon than Make "G".	42.6% more miles per gallon than Make "D".	22.0% more miles per gallon than Make "S".	25.2% more miles per gallon than the average of all makes.
IN ONE YEAR (10,000 miles) FORD SAVES	129 gallons of gas	160 gallons of gas	49 gallons of gas	219 gallons of gas	113 gallons of gas	129 gallons of gas

HOW GAS MILEAGE DROPS FOR OLDER TRUCKS

Everybody knows that gas mileage falls off as a truck gets older. But how fast, how far? 499 pickups were tested. In these tests, the '59 Fords were tested without break-in.

As you can see, gas economy tends to drop sharply somewhere between the second and fourth years . . . levels off after six years. Had the new '59 Fords been broken in (as all 1959 trucks were in the tests above), they would have achieved a much greater advantage.

'59 FORD GAS MILEAGE BETTER BY

25.6%	27.5%	24.6%	15.2%
9- to 11-year old trucks	6- to 8-year old trucks	3- to 5-year old trucks	1- and 2-year old trucks

HOW DIFFERENT KINDS OF DRIVING AFFECT GAS MILEAGE

Here is how gas economy in various Showdown tests compared with economy at 30 mph—the point of maximum mileage.

100%	80%	68%	63%	48%
30 MPH STEADY SPEED	45 MPH STEADY SPEED	NORMAL CITY TRAFFIC	60 MPH STEADY SPEED	NORMAL RETAIL DELIVERY

GO FORD-WARD for savings
FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . LAST LONGER, TOO!

For air conditioning fits your budget,



For a built-in look, this new "low-boy" TRANE induced air unit fits under low windows, blends with modern interiors.

Trane changes climates to order in buses and trains, ships and planes; heats and cools factories and schools, hotels and homes. For human comfort or industrial processing—for any air condition,

**talk to the men who know
all 4 related fields . . .**



Air Conditioning Where space is a problem this TRANE CentraVac water chiller may be installed anywhere from basement to rooftop. And it's so thrifty it automatically paces itself to supply just the amount of chilled water you need.

that fits your building, make it Trane!

When you plan air conditioning for your building—new or existing—turn to TRANE for year-around comfort with maximum economy.

TRANE Air Conditioning Systems give you exactly the climate you want, with individually controlled units. Each occupant dials his own comfort. And TRANE Air Conditioning is *flexible*: you are not limited to one type of system. TRANE engineers and designers are experienced in all types of heating, ventilating and air conditioning . . . for buildings of every size and type. That means you get equipment that is correctly designed to fit your individual

building and tenant needs. Installation is easy, too, because equipment may often be installed in out-of-the-way areas—all over the building.

Best of all, TRANE Air Conditioning is thrifty! There's TRANE equipment to solve the problem of cooling just a part of the building after hours. And if frequent tenant changes are the problem, there's TRANE equipment that *automatically* adjusts itself to meet changing requirements.

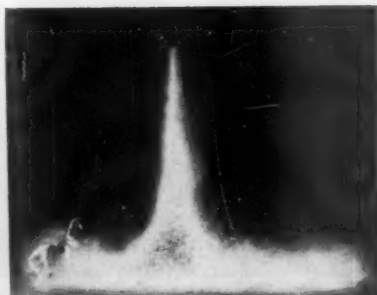
So when you plan air conditioning for any multi-room, multi-story building, have your architect or consulting engineer talk to TRANE. Or write TRANE, La Crosse, Wisconsin.

For any air condition, turn to

TRANE

**MANUFACTURING ENGINEERS OF AIR CONDITIONING,
HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT**

THE TRANE COMPANY, LA CROSSE, WIS. • SCRANTON MFG. DIV., SCRANTON, PA. • CLARKSVILLE MFG. DIV., CLARKSVILLE, TENN. • TRANE COMPANY OF CANADA, LIMITED, TORONTO
87 U.S. AND 19 CANADIAN OFFICES



Heating Put the heat where you want it with an out-of-the-way TRANE Unit Heater! Exclusive diffusion features give you any combination of heating patterns for warehouses, factories, garages and other open areas. Sizes and models for every job!



Ventilating Ideal climate for learning in the modern school! TRANE Unit Ventilator has exclusive *Kinetic Draft Barrier* that stops drafts . . . ends hot spots, cold spots, sleepy corners. Gives each pupil perfect learning climate, all day long.



Heat Transfer Cooling for a high speed jet plane. Compact, lightweight TRANE Brazed Aluminum Heat Exchangers help cool cabins and electronic equipment for modern aircraft . . . also serve the oil, gas and chemical industries.



NEW PLASTICS *inspire new product designs*

The news columns have been filled recently with rapid-fire developments in thermoplastic materials . . . materials that hold promise for the improvement of hundreds of products, both old and new. As these stories break, you'll notice a high percentage of them featuring a Dow ma-

terial. Take Zerlon® 150. A few weeks ago Dow introduced this weather resistant, optically clear plastic with an exciting new range of cost-saving properties. Several other news-makers in the complete Dow line are discussed on these pages.

*Trademark

"AGELESS" STYRON 480 GIVEN LIFETIME GUARANTEE IN NEW SUPERMARKET TOOL

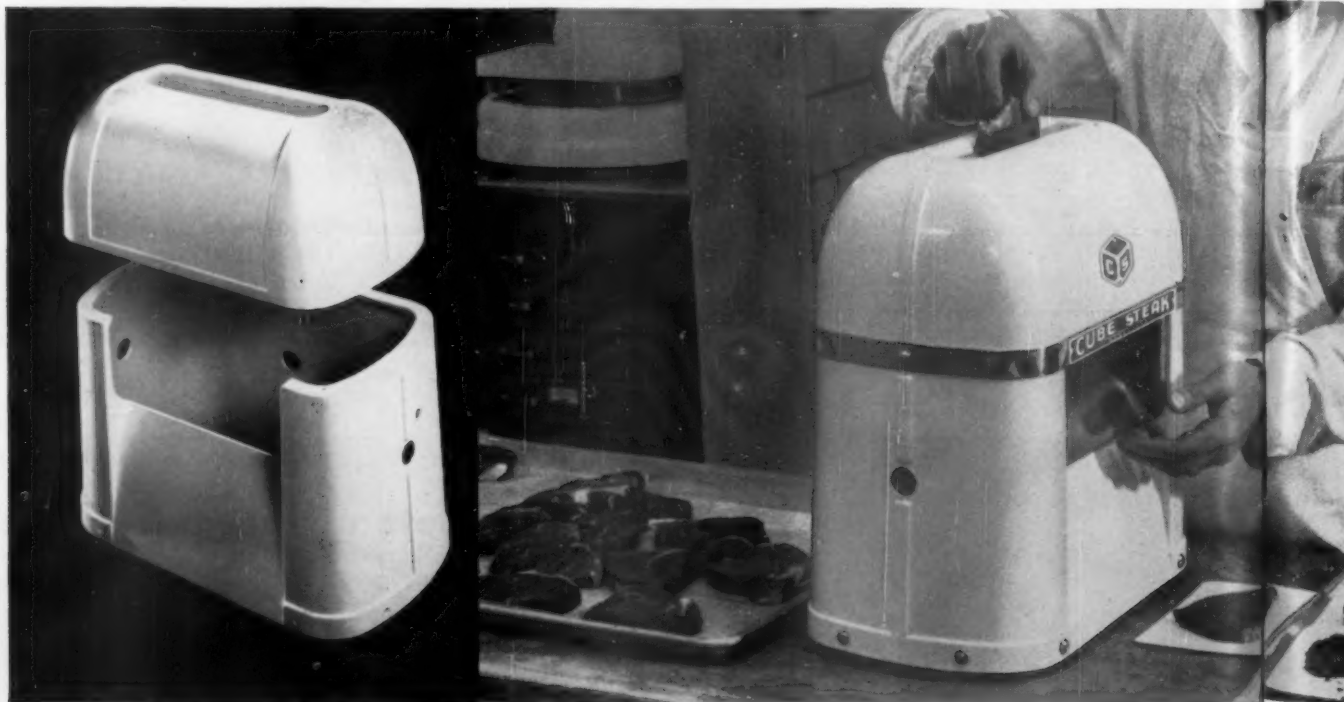
The housing of this new Cube Steak Tenderator is guaranteed for the life of the machine. This is a generous guarantee to make on equipment in rough and tumble supermarket service, but the manufacturer isn't worried . . . he knows the housing is made of Styron® 480. This versatile thermoplastic was chosen because it's durable and highly resistant to meat juices, has super high impact

strength, an easy-to-clean surface.

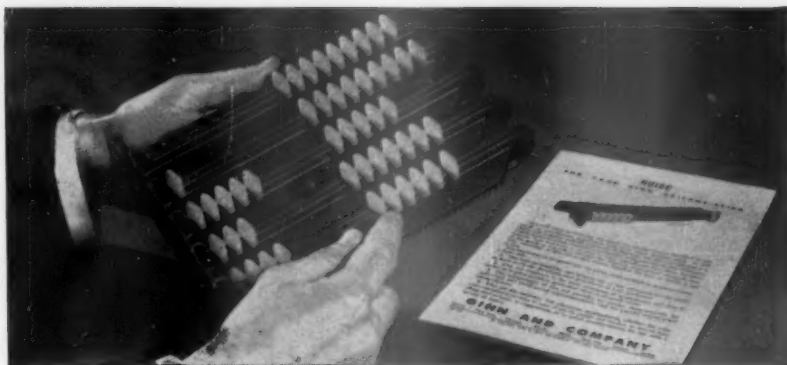
The excellent aging characteristics of Styron 480 were also an important consideration. In fact, the lifetime guarantee could not have been made without them. Fabrication was simplified and production costs substantially reduced by switching to plastic.

The housing made of Styron 480 is an

excellent example of how Dow plastics help make good products better. An increasing number of manufacturers are selecting from the extensive Dow line of eight basic thermoplastics and dozens of specialized formulations. And you get extras from Dow you can't buy on a cost-per-pound basis: technical service, marketing assistance and a color styling service that's second to none.



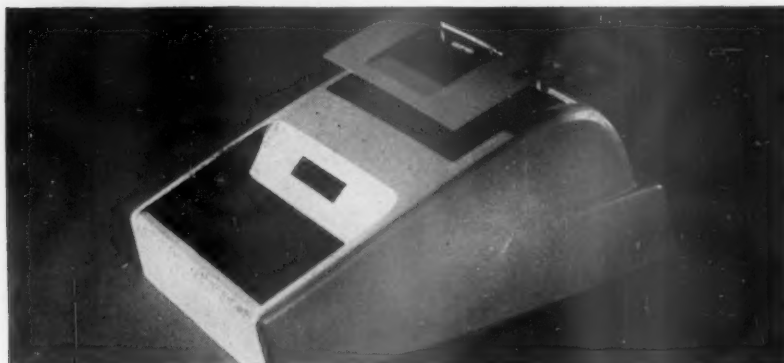
THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN



Ready for the sales countdown . . .

with this abacus made of Styron 475

A prominent publishing house markets this attractive, highly useful educational tool. It's made of polyethylene and Styron 475, a high impact Dow plastic with excellent dimensional stability, design flexibility and moldability to spare. This abacus was developed for the publisher by a custom molder who offers integrated design, engineering and production services. It's another example of how creative engineering utilizes the many benefits of Dow plastics in new product designs.

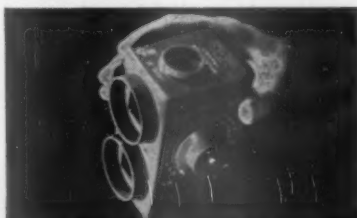


. . . and this adding machine housing molded of Styron 440

Outstanding impact strength, design versatility and a wide range of colors make Styron 440 an obvious choice for this application. The housing is easy to keep clean and its high resistance to heat prevents distortion when the machine is displayed in direct sunlight. Styron 440 also eliminated the extra fabrication and finishing operations that were necessary with the material previously used in the housing. The surface is smooth and polished when removed from the mold.

4 MORE PRODUCTS

fashioned from America's first family of thermoplastics



ETHOCEL. "The aristocrat of plastics," Ethocel® provides exceptionally high impact strength for this compact transit. Its superior dimensional stability helps keep the lens positioned in the one right place.



TYRIL. Characteristics such as beauty, strength and resistance to perspiration make Tyril® the ideal choice for this pen and pencil set. Tyril also provides excellent moldability for intricate details such as threaded sections.



STYRON 440. This new speaker housing for auditorium walls utilizes many of the properties of versatile Styron 440: Excellent large-area molding characteristics, a surface that requires no finishing.

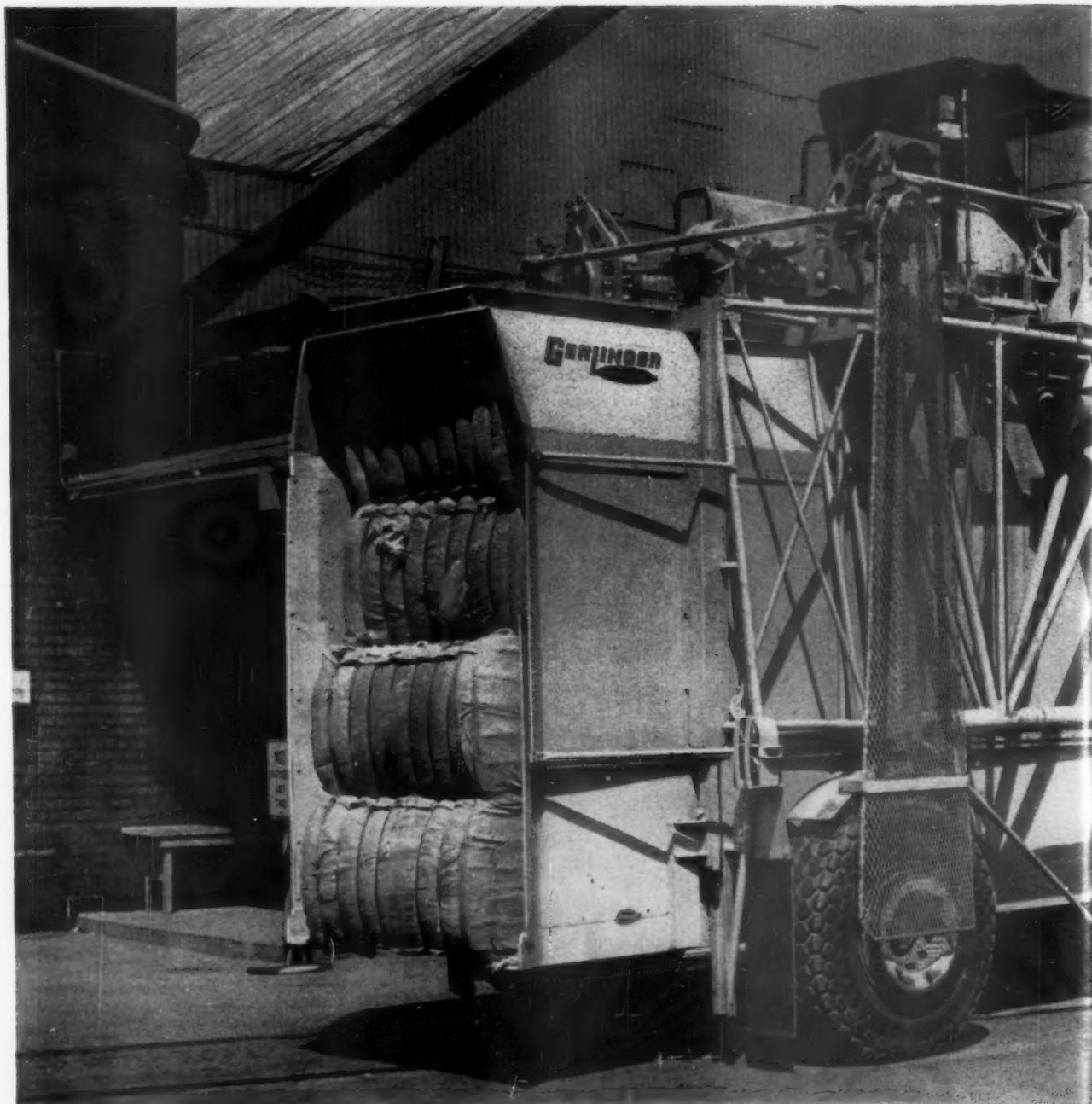


TYRIL. This transistor radio housing made of Tyril has toughness, dimensional stability and a wide range of colors. Excellent electrical properties are other benefits of this outstanding Dow thermoplastic.


FOR MORE INFORMATION about the versatile Dow plastics and the product designs discussed on these two pages, write to us today. **THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Department 1510AF3-14.**

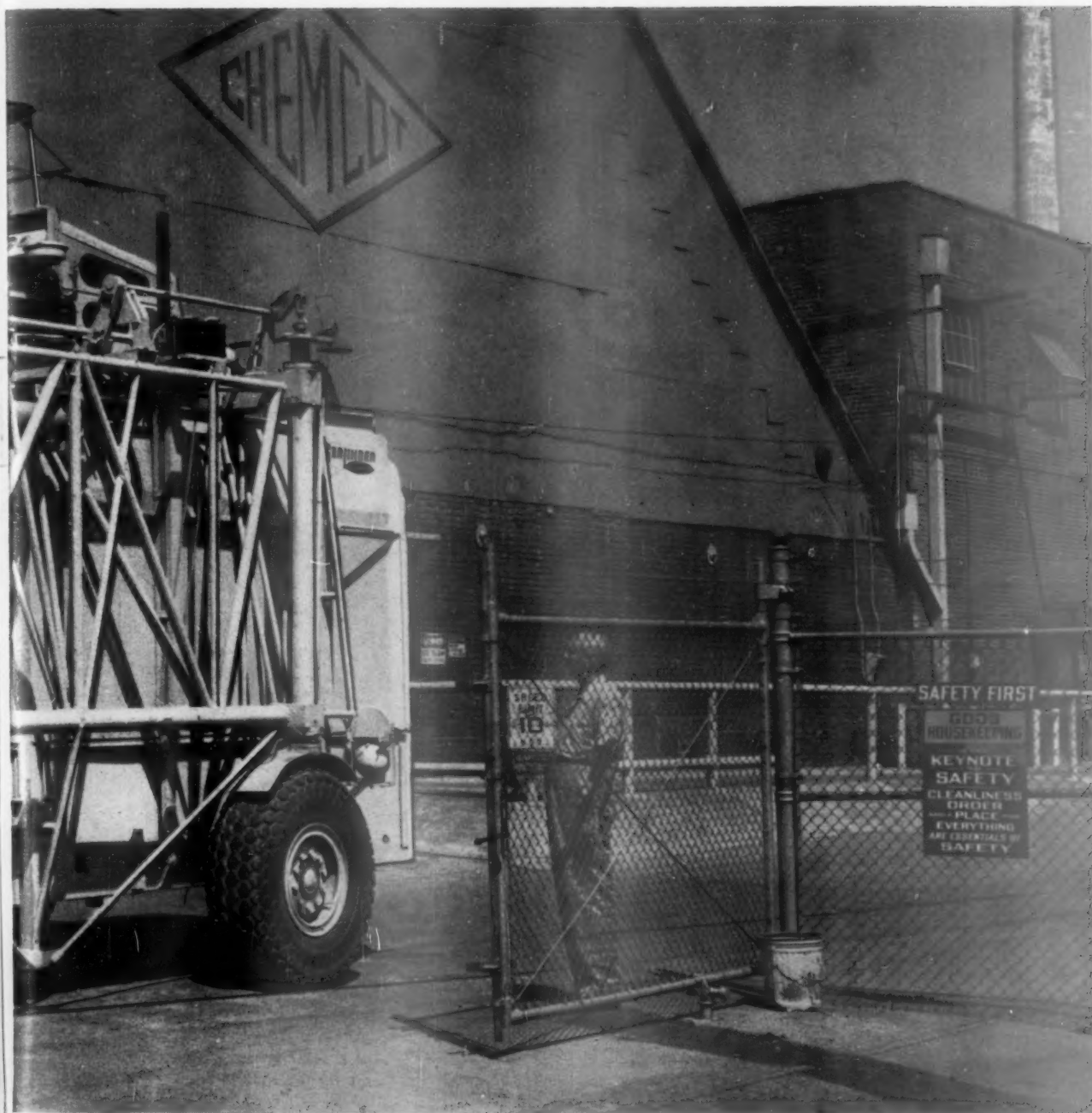
Industrial Molding Materials • Packaging Materials • Paint and Coating Materials • Building Products





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 CLEVELAND
 AUDITORIUM  JUNE 9-12
 1959
 BOOTHS 1302-1307-1404



Photo—Southern Chemical Cotton Co., Chattanooga

When you must transport heavy loads—yards away through congested areas or miles away over country roads—nothing does it as profitably as a *Gerlinger Carrier*. Look at it this way . . .

Your product can be loaded, delivered and unloaded by one man without additional handling. As much as 30 tons are handled in one quick, cost-saving trip.

Chopping dollars off the rising cost of handling materials is unquestionably the fastest, surest way to extra profits without increasing unit costs. Let us prove it with latest on-the-job facts and figures.

Ask for *Certified Job Studies* relating to your specific handling operations—and the new Gerlinger Carrier Specification Folder *GMC*. Write Towmotor Corporation, Cleveland 10, Ohio or Gerlinger Carrier Co., Dallas, Oregon.*



LEADERS FOR 40 YEARS IN BUILDING
FORK LIFT TRUCKS, CARRIERS AND TRACTORS

*Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation



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He is the dynamic image of CF&I... the symbol of dependable steel products. Look for him when you buy.

Plants at:

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40 Warehouses and 60 Sales offices located coast to coast

THE COLORADO FUEL AND IRON CORPORATION
DENVER • OAKLAND • NEW YORK



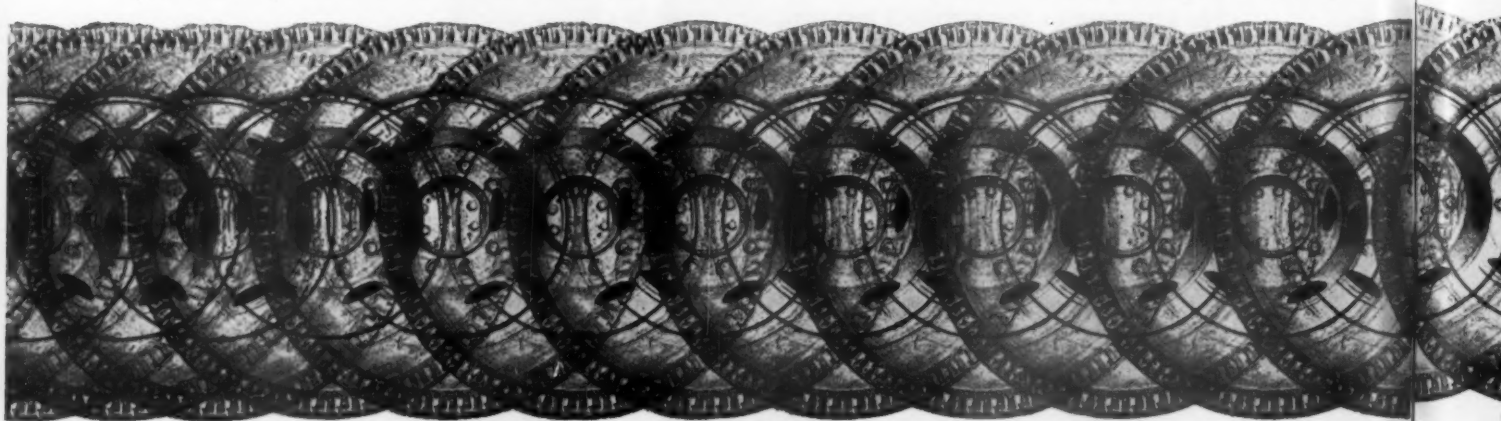
Ten years ago five percent of all heavy-duty



Today more than twenty-five percent of all



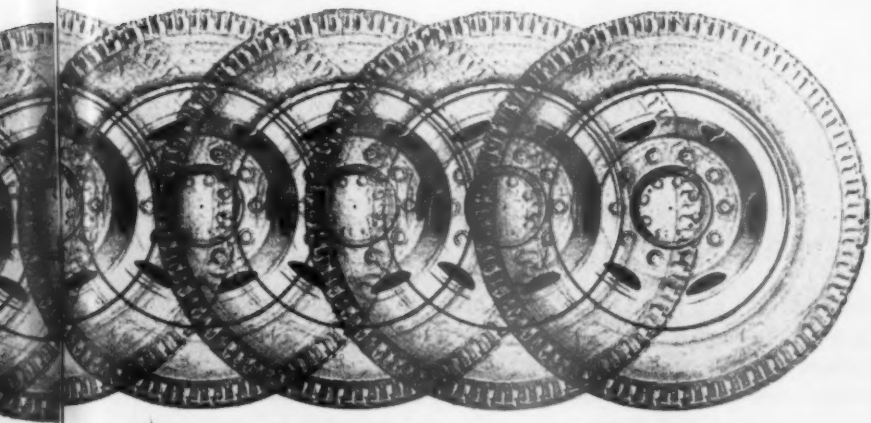
Cummins diesels power more new heavy-duty



trucks were powered by diesels...

heavy-duty trucks are powered by diesels...

trucks (57%)* than all other makes of diesels!

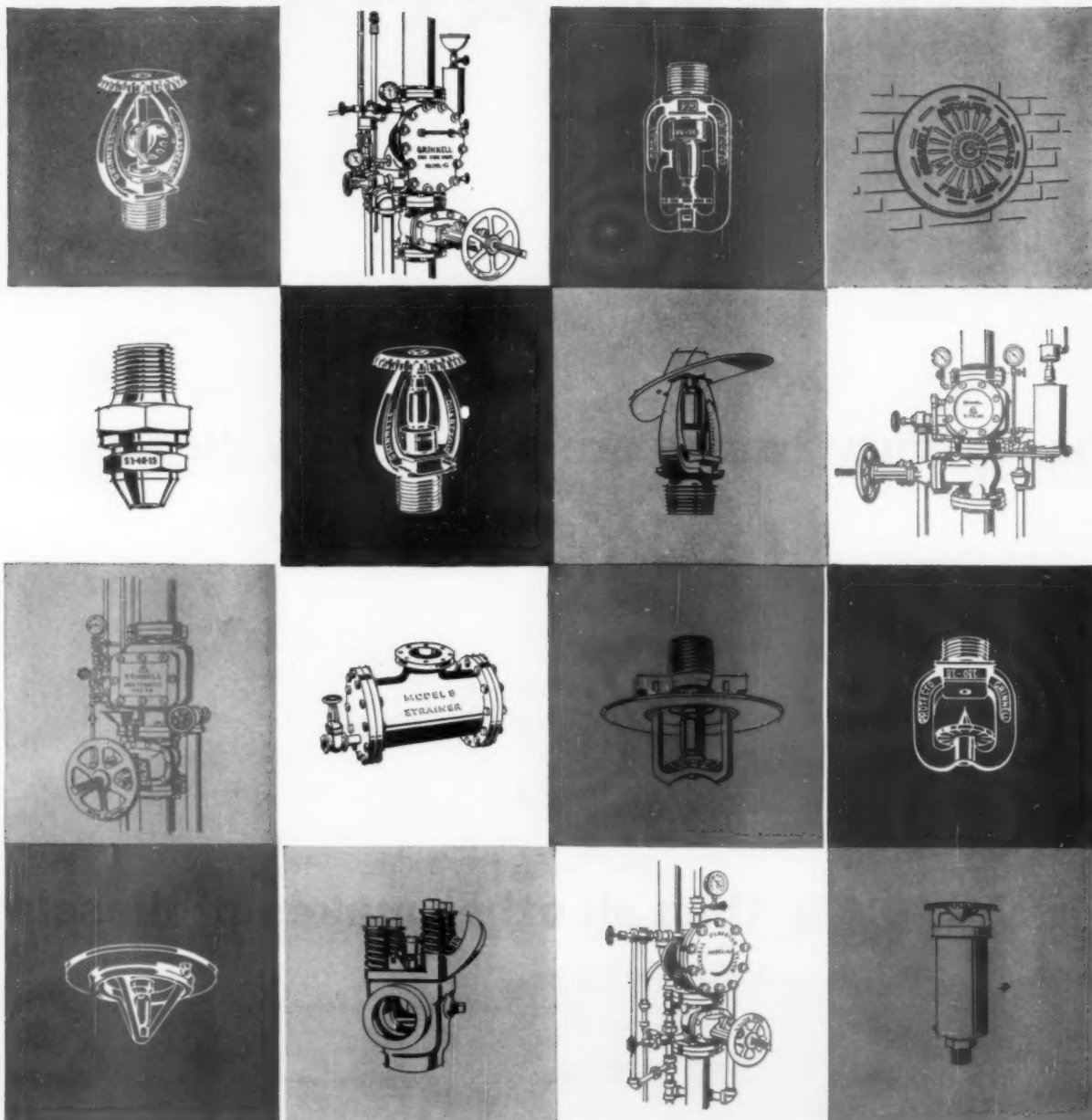


Today, diesels are the proven way to beat the rising costs of moving materials and goods. More and more truckers are specifying Cummins for these reasons: LONG ENGINE LIFE, as much as 350,000 or more miles before overhaul; LOW COST MILEAGE, 2¢ a mile fuel and maintenance savings over gasoline power; SERVICE AVAILABILITY, more than 400 service points throughout the U.S. and Canada. That's why in 1958, Cummins powers 57% of all new diesel trucks registered.

Cummins Engine Company, Inc., Columbus, Indiana

CUMMINS

*This figure is based on the new diesel truck registration figures of the R. L. Polk Co., through September 1958.



the best fire protection money can buy!

Most people think that all automatic sprinkler systems are much the same...but nothing could be further from the truth. They vary in durability, reliability and the speed with which they apply water to the fire. During the past 89 years of research and development Grinnell has invented and perfected sprinkler heads, nozzles, projectors, release devices, alarms, valves and other components for practically every conceivable need. When these are incorporated into fire protection systems executed in accord with Grinnell research and experience, engineered to **your** special needs, fabricated in Grinnell shops, and installed by expert Grinnell erection crews... you have protection which no ordinary sprinkler system can match. Let Grinnell recommend the best system for you. Write Grinnell Company, Inc., Providence 1, R.I., or to the Grinnell Fire Protection office near you.



FIRE PROTECTION SYSTEMS SINCE 1870

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*How Emery
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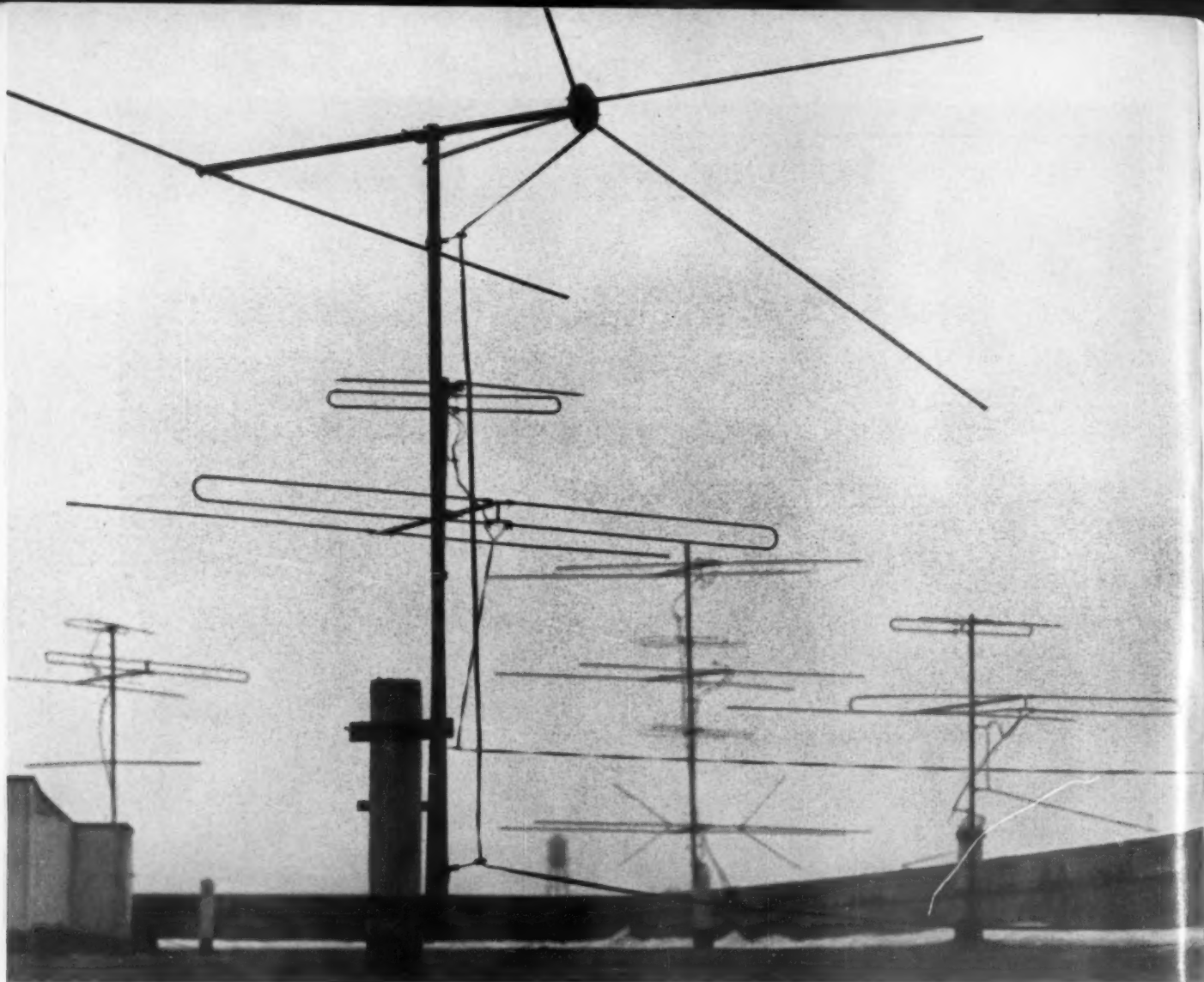
Blairsville Machine Products Co., near Pittsburgh, figured that 20 four-foot cutters would see it through an order. These were not enough. So it was faced with buying twenty more cutters to assure uninterrupted production while resharpener cutters were in transit by rail and truck from Detroit.

Rather than buy more cutters, it was decided to use Emery Air Freight. Emery gave same day or next morning delivery. And because of Emery's coast-to-coast teletype network, Blairsville

Machine Products Co. could determine within two hours when its shipment would reach Detroit or be returned.

Emery Air Freight charges, based upon 30 shipments, were only \$325.01. Our customer got uninterrupted production and saved buying 20 more cutters at a cost of \$5000.

Call today to find out how Emery Air Freight can fit into your every day operations . . . help you cut production costs, reduce inventory and increase your sales.



WHICH ONES WILL LAST (and last, and last!)? THOSE MADE OF WEIRKOTE® ZINC-COATED STEEL!

Steel tubing that's protected against corrosion even under the most trying circumstances.
Steel tubing that's easily fabricated to meet the most exacting specifications.

That's what you get in tubing made of Weirkote zinc-coated steel!

Weirkote's zinc coating—applied by the continuous process throughout, and so uniformly that every square inch is protected—is skin-tight. There's absolutely no flaking or peeling no matter how tortuous the crimping, twisting or other stresses of fabrication. In fact, Weirkote can be worked to the very limits of the steel itself.

The use of Weirkote can eliminate the need for any further coating process after fabrication. Its tight zinc coating is completely intact and remains so during fabrication and on the job. Weirkote zinc-coated steel tubing is particularly suited for jobs where weather is a factor to be taken into consideration.

Take a good long look at the possibilities and advantages of using Weirkote zinc-coated steel to meet your tubing requirements. For the complete story on Weirkote and how it can help you, write Weirton Steel Company, Dept. U-7, Weirton, West Virginia.



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WEIRTON, WEST VIRGINIA

a division of

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BUSINESS OUTLOOK

BUSINESS WEEK

MAR. 14, 1959

A BUSINESS WEEK

SERVICE

You can, if you try hard, find a few things that may raise doubts about how fast business will go on rising. One is the continuing problem of unemployment, another is the Federal Reserve's credit tightening.

But unemployment will be decreasing from now on, and money isn't going to begin to pinch severely any time soon.

In the meantime, most business portents continue quite favorable.

Homebuilding may still have some pleasant surprises for business—if Washington chooses to loosen the leash on financing.

Housing's resiliency at the bottom of the recession showed that there's plenty of demand for homes, especially in the lower price ranges.

And with personal income setting new highs each month, this demand will be pretty amply backed with cash.

You see the demand for homes in the latest consumer survey made by the Federal Reserve Board (page 36). It shows about as many people planning to buy new homes this year as in 1955—a whopping year.

Builders already are laying heavy bets on this year's market. Contract award figures compiled by Engineering News-Record, a McGraw-Hill publication, have awards for mass housing running 65% above last year.

February housing starts held above 1.3-million at annual rates.

Yet, it's usually assumed that tighter money later this year will pinch back housing to little more than 1958's 1,130,000 starts.

But it's worth remembering that in previous recovery years—1950 and 1955—housing starts topped 1.3-million. And anything weaker than that could mean slower recovery than Washington is counting on.

Some changes in housing finance that will favor private homebuilding seem sure to come out of Congress this year.

Pending bills would permit interest rates on VA mortgages to rise from the present 4¾% to 5¼%. Some housing experts think this alone could boost 1959 housing starts by 50,000 units.

Other provisions would provide easier financing of trade-ins of existing houses, and would permit bigger FHA loans at higher rates for apartment building as a spurt to rental housing.

These proposed changes reflect growing arguments that housing hasn't had a fair chance to compete for needed financing in what appears to be a growing market for better housing.

Population continues to grow by 3-million persons a year. Larger homes are required as families get bigger.

Moreover, more families each year live in urban areas. Since 1952, nonfarm households have been increasing at the rate of 900,000 a year. And urban renewal and the highway program are adding to the 300,000 or so homes demolished each year.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

MAR. 14, 1959

More and more families can afford to upgrade their housing. Households with incomes over \$5,000 have been increasing steadily. As this proceeds, housing and related expenditures get a growing share of the consumer dollar.

Here are some dollars-and-cents factors that help home sales:

- **Equities in older houses continue to rise** with higher real estate values. The unearned increment helps with the downpayment on a new house.
- **Rents have been going up** a bit faster than homebuilding costs. Home ownership retains its advantage over renting.

—●—

Both employment and unemployment were virtually unchanged in February. That's about what you would expect when business is reasonably good; last winter, when business wasn't good, unemployment jumped nearly 700,000.

Here's the year-to-year comparison: Unemployment is more than 400,000 lower than it was a year ago while 700,000 more people have jobs.

March should show at least a seasonal improvement in unemployment.

New claims for unemployment compensation have declined appreciably in recent weeks. They're now running about 40% under a year ago.

Moreover, since the jobless count was taken at mid-February, the total actually drawing unemployment compensation has started to decline; last year, in late February and early March, it went on rising rapidly.

Nonfarm employment of 53-million in February was almost 900,000 better than last year. But farms were doing nothing to help out. Agricultural employment held right at January's 4.7-million level, the lowest ever.

—●—

If the auto industry hasn't contributed all that it might have to employment, you can put part of the blame on imported cars.

Their sales rose to 77,000 out of the estimated 920,000 deliveries to U.S. auto buyers in the first two months of this year. That's just about double the rate they were running at the start of last year.

The 840,000 sales for American makes, however, represent a very respectable gain. The two months last year ran only about 675,000.

—●—

Steel mills are pushing to another record this week; output is scheduled to go to 2.6-million tons, thus eclipsing the new weekly mark of 2,556,000 tons put into the book only last week.

And this has side effects. For instance, ore boats will be working early and hard. (Building up the ore piles is steel's only insurance against runaway scrap prices next winter if operations are high, and they presumably will be.)

U. S. Steel's Pittsburgh Steamship Co. announced this week that it will operate more vessels this year and send them up the Lakes much earlier.

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60% brighter* in **Kodapak Sheet**

"Kodapak" is a trademark for Eastman's plastic sheet.



Battery jacket by the Flexible Packaging Division of the Continental Can Company for National Carbon Company, makers of "Eveready" Batteries.

Outshines them all: By actual light-meter test, the "Eveready" battery's new label-casing of metallized Kodapak is 60% brighter than conventional battery jackets: Little wonder it catches the shopper's eye!

Secret of this new casing is tough, transparent one-mil Kodapak, reverse-printed in color, then metallized and backed with fiberboard.

The result is a package with a "come-hither" look

that's making cash registers ring up better and better sales everywhere.

Suggestion: Kodapak Sheet comes in a wide variety of widths and thicknesses for use in packaging and labeling. Uniform, physically and dimensionally stable, it is economical to process. For further information about how Kodapak "makes good products sell better"—just call our representative or write:

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Sales Offices: New York, Chicago, Atlanta. Sales Representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal (Paper Sales, Ltd.).

*than average of popular batteries tested.



Parts determine downtime costs

Few parts affect downtime costs so drastically as the bearing. For a single bearing failure can halt a key machine, bring production to a standstill—turn damage into disaster.

No other bearings producer can offer you as much experience in making bearings dependable as SKF, makers of the most complete line of ball and roller bearings.

Why not reduce your downtime costs by putting this experience to work today? Just call the nearest SKF office.

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Spherical, Cylindrical, Ball, and Tapered Roller Bearings

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SKF

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

*REG. U.S. PAT. OFF.

Unemployment: An Issue Again

● Leaders of both parties had hoped it would go away as business continued to improve. But it didn't.

● On the heels of the highest January total of jobless in 18 years, congressmen from industrial states—hit the hardest—feel forced to act.

● First they'll try to get federal aid extending unemployment insurance payments renewed for another year, or even six months. After that comes a fight over area development for distressed regions.

Unemployment gives every sign of forcing itself once again to its traditional place near the top of any list of issues that agitate Washington.

For all its deep concern to politicians, this issue has been drifting for months in the backwaters of Washington policymaking. Though January's total of jobless was the highest for any January in 18 years, neither the Administration nor the Democrats in charge of Congress have had unemployment very high on their list for urgent action. Leaders in both parties simply assumed that business recovery would solve the problem.

Now the Democrats, at least, have decided that this may not happen. Unemployment stands at 6% of the work force. It was 4% when the recession began. If it showed signs of shrinking back to that level, both parties would be happy to keep the issue in the background. But the suspicion is growing that the rate may stick around 5% even while business continues to climb this year and next.

• **Time for Action**—To members of Congress from the industrial East and Midwest, where unemployment is the most pressing problem, a national rate of 5% is political poison. They are rushing to apply antidotes:

• **Speaker Sam Rayburn** last week gave top priority to extension of the current emergency payments to states for unemployment benefits. Democrats want to extend federal aid a year beyond the present expiration date—the end of this month.

• **Rayburn** also indicated that the Ways & Means Committee, which originates such legislation, is about ready to

start hearings into bills to impose on the states more rigid federal standards for emergency aid in unemployment benefits.

• A subcommittee of the Senate Banking & Currency Committee headed by Sen. Paul Douglas (D-Ill.) held hearings last week in Detroit and West Virginia and will recommend a bill to aid areas that have been hit especially hard by unemployment.

• **Unions** will bring 5,000 unemployed to Washington on Apr. 8 for a mass demonstration to dramatize the plight of the jobless. The purpose is to stir Congress and the Administration into quick action. A faster rate of economic growth and a shorter work week will be stressed by the unions.

I. White House View

The Administration has not abandoned its belief that unemployment is certain to decline to more comfortable levels as business rises.

Labor Secy. James P. Mitchell predicts that unemployment will drop to 3.2-million in October from the current 4.7-million. As a percentage of the work force, this would mean a dip to 4.8%, a big step toward the 4% that politicians are used to living with.

Raymond J. Saulnier, chairman of the President's Council of Economic Advisers, has made pretty much the same forecast. Starting with the current number of jobless, he assumes a rate of economic recovery for the rest of the year that's somewhere between the recovery rates of the 1948-49 and 1953-54 recessions.

"You will find yourself at a level not

much above 3-million by the turn of the year," he says.

If this is borne out and the economy goes on climbing in 1960 to a \$500-billion average gross national product—as some of Eisenhower's advisers think it will—unemployment might well be down to 4% before Election Day in November.

• **Taking No Chances**—But there is growing evidence that Democrats will not take the risk—and that many Republicans will join them in insisting that something concrete be done.

The first test will be the move to extend the federal emergency payments.

These payments were approved last year by Congress, at the suggestion of Eisenhower, as a way of softening the impact of the recession. In many states, the 26-week limits on unemployment payments were being exhausted, and Congress voted enough money to extend the maximum to 39 weeks. This money is still going to the states at a rate of about \$40-million per month.

The Democratic move is to extend this arrangement for another year. This would not aid anyone whose maximum of 39 weeks is used up, but it would keep some 300,000 persons now getting the extended aid from being cut off short Apr. 1 if the maximum should revert to 26 weeks.

• **In for a Fight**—The Administration is split on the proposal.

Eisenhower has already brushed the idea aside as the wrong step to take "when we are on a curve of rising prosperity." But some of his advisers are reported arguing for it—perhaps on a basis of a six-month extension of the emergency aid.

Democrats hope to have a year's extension approved and on Eisenhower's desk before the Easter recess. He may veto it on the grounds that it would add \$100-million to this year's spending, and some \$300-million in fiscal 1960—enough to throw the 1960 budget into a sizable deficit.

• **Long-Range**—Improvement of the basic structure of the jobless insurance system will be a slower process, though both Democrats and the Administration want to try it.

Mitchell argues that the \$30.58 a week average payment last year, and the average period of less than 15 weeks that payments were received, are both insufficient. In the past, the Adminis-

tration has appealed to states to raise these averages. The issue now is whether the Administration should back higher standards by way of a federal law.

II. Congress Ready to Act

Democrats are already pushing for federal action.

Sen. John Kennedy (D-Mass.) and 34 co-sponsors, including several Republicans, have a bill in the Senate that would make 39 weeks of coverage a federal standard. The bill would also raise the weekly benefit in many states by making the minimum either half the claimant's salary or two-thirds of the average annual wage in the state, whichever is smaller.

In the House, about 130 bills similar to the Kennedy proposal are on file. Hearings will probably be held by the Ways & Means committee on one of these bills early next month.

• **Economic Weak Spot**—Reform ideas of this kind stem from a conviction that the recession disclosed serious structural weaknesses in the unemployment insurance system. Three University of Michigan professors—Fedele Fauri, William Haber, and Wilbur Cohen—last week released a study that highlights many of these weaknesses.

"The tragic part of this situation," they say, "was that \$7-billion in unemployment reserve funds were not touched during the recession. If state and federal unemployment laws had permitted \$1.5-billion to \$2-billion of these reserves to be used, many personal hardships would have been avoided."

The study estimates that the \$3.4-billion of unemployment benefits paid in the year ended last Oct. 31 replaced only 20% to 25% of all wages lost during the period. Among workers covered by the insurance plan, benefits averaged only 37% of average weekly earnings.

• **Area Development**—The area development approach is aimed at the most stubborn type of unemployment—that associated with permanently distressed industries such as the anthracite region of Pennsylvania, the soft coal areas of West Virginia, and the textile districts of New England.

Congress voted a development bill last year that Eisenhower vetoed. Douglas has 39 co-sponsors for his bill this year, and has the backing of party leaders. He wants \$389-million for the program. Sen. Everett Dirksen (R-Ill.), GOP leader, is backing an Administration bill that calls for \$53-million for the same purpose.

The Douglas bill provides \$300-million for loans—\$100-million for industrial development, \$100-million for rural rehabilitation, and \$100-million for public facilities, such as access roads,

water supplies, and the like. Borrowers may be private groups. In addition, it would provide smaller sums for vocational retraining of unemployed workers, market studies, and engineering studies. The Administration bill provides money for industrial loans only.

The Douglas proposal may be scaled down a bit, but chances are good that Eisenhower will again be confronted with a bill far in excess of the level he approves.

III. As Labor Sees It

The area development idea tackles unemployment as though it were a collection of local problems—which is exactly how many experts now regard it. As a result, broadbrush efforts to reduce unemployment—by increasing consumption, for example—aren't attracting so much attention as they once did.

Labor leaders, however, are advancing two proposals that treat joblessness as a general problem.

The first suggestion is to speed up the rate of economic growth, by federal spending if necessary, until joblessness is back down to pre-recession levels.

The second—in seeming contradiction

—is to reduce the 40-hr. work week.

• **The Argument**—Labor seems to be arguing, in the statement issued at the recent AFL-CIO executive council meeting in Puerto Rico, that we must produce more, to cut unemployment, and must also work fewer hours—also to cut unemployment.

Thinkers in the labor movement argue this way:

We want faster growth; we want more output and income. But if nothing is done to get them, we must somehow deal with the problem of jobless people, and a shorter work week is one way to do it.

Further, they say, there may be specific industrial situations where a shorter week could be put into effect advantageously, without making it a total national solution that might not suit other industries.

Unions will push for the shorter week in contract negotiations this year, but talk about amending the Fair Labor Standards Act to provide for a 35-hour week and a 7-hour day is not taken seriously. Most observers believe it will be several years at the earliest before this proposal gets any substantial backing in Congress.

A Manmade Match for Tree Rubber

Shell Chemical starts commercial production of synthetic that will end dependence on imported natural rubber.

First commercial production of synthetic rubber that duplicates tree-grown rubber was announced jointly this week by Shell Chemical Corp. and U. S. Rubber Co. The material, polyisoprene, is being put to use initially in truck tires, which—because of heat buildup and the punishing loads they carry—have up to now required tree rubber.

Shell is making polyisoprene at three Los Angeles area plants at the rate of 5 tons a day, for sale to U. S. Rubber at 30¢ a lb., f.o.b. Torrance, Calif. The tire company will make the popular 7.50-20 size of truck tire from this rubber at a rate of around 100 a day, at the same price as the natural rubber tires.

By the end of the year, Shell expects addition of equipment to bring production to an annual rate of 15,000 to 20,000 tons of polyisoprene, and U. S. Rubber plans then to be taking 6,000 tons of this output.

• **Better, Cheaper**—Chemically, polyisoprene is a match for the best grade of tree rubber. Because it is made synthetically, its quality can be made much more uniform and to much higher standards of purity. This cuts down on processing costs and should, as production volume increases, result in reducing price.

The development of this rubber marks the last step in freeing the U. S. from dependence on foreign sources of natural rubber, an essential ingredient not only of truck tires but also airplane tires, whitewall passenger car tires, footwear, surgical equipment, and industrial rubber.

Last year, the U. S. consumed 485,000 long tons of natural rubber. U. S. Rubber Co. alone used 60,000 tons from its own plantations in Malaya and Sumatra; 6,000 tons of the new material from Shell would replace 10% of this. Most natural rubber comes from Southeast Asia and Africa.

• **Other Companies**—Other leading rubber companies—Goodyear, Goodrich, and Firestone—have at various times announced the chemical synthesis of polyisoprene in the laboratory. But commercial production has been held up by doubt that the synthetic could compete in price with natural rubber.

Only a few weeks ago, Firestone announced plans to build a plant in Orange, Tex., to produce either polybutadiene or polyisoprene. But company spokesmen indicated that the first production at the plant, scheduled to be completed in 1961, would probably be polybutadiene.

Trying to Sell Men a New Look

Many in the men's wear industry think the continental style (right) is just the thing to overcome male resistance to fashion.

The U.S. business executive, 1959 style, has—as the sketch at right seems to indicate—a split personality when it comes to what he shall put on his back. So, in fact, does the busy industry that makes and sells him his suits.

Right now, the crux of the split is the much-discussed continental look. Is it, or isn't it, the look of the well-dressed gentleman for 1959—and, maybe, for some years to come?

• **Contradictory Answers**—A good chunk of the men's clothing industry is betting that it is. They are counting on it to stir the proverbially cautious male to a new sense of fashion importance—and to more buying. The solid, conservative bloc, on the other hand, sees no such hope. Men will buy what they have always bought, they hold. Fashion in men's wear is for the birds.

Yet even the dissidents or conservatives usually admit that the advent of the continental look has a not-to-be-ignored plus value. It causes talk. It gives retailers something to advertise. It gets a man to thinking about his clothes. And then his old suit may not look quite right. He may come to the store. That's fine—even if he buys another suit just like his old one.

A few enthusiasts go further. Fashion, they believe, can come to have something of the importance it has to the women's wear business. Men are beginning, in their own slow fashion, to think of style.

• **Slight Changes**—By the giddy standards of women's fashions, the changes that the continental look brings are picayune. A slightly shorter, narrower, cut-away jacket, maybe pinched a bit at the waist; a narrower, higher, peaked lapel; a slanted pocket; maybe slightly tapered, cuffless trousers—any women would ask: What's all the fuss about? In the slow evolutionary process of change in men's wear, however, that's a lot. Some feel these changes will bring others: narrower hats, new collars and ties. Others see in it—over the long haul—a chance to revitalize an industry that can stand some revitalizing.

Michael Daroff, of H. Daroff & Sons, says sweepingly: "Everything in the men's wear industry is being geared to the continental look—from suits and topcoats through hats, ties, shirts, and shoes." Daroff is showing both continental and "modified" suits this fall. But the "modified" is a conservative version of the continental style. John B. Stetson Co. is selling narrower,

trimmer continental hats, shirts with special collars, and neckwear for the new mode.

Essentially a dressy style, continental fights against the overwhelmingly casual trend of postwar years. The West Coast, which has come up with its own California Continental, insists that comfort come first. Devoted though it is to sportswear, the Coast is giving the California version its due, even around Los Angeles. "It is possible," thinks Stetson's president, David H. Harshaw, "to be casual and in high style at the same time today."

• **Sales Outlook**—However, the industry as a whole doesn't expect any new look to boost sales drastically. To a man, they are optimistic about the fall selling season after this spring's pickup. But their optimism is grounded in more practical reasons. Retailers' inventories are in good shape; they are buying.

A manufacturer sums up the recession slump in men's wear this way: "The man of the house is low man on the totem pole. First, you buy necessities—food, shelter. Then you take care of the children. Then you take care of your wife. Then you'll buy a car or a new appliance. If there's anything left and if you have a hole in the seat of your pants, you'll buy yourself a suit."

How much fashion will help sales is still the question.

• **Skeptics**—Meyer Kestnbaum, president of Hart Schaffner & Marx, reckons that at least 40% of the male population just isn't style-conscious at all. John C. Wood, president of New York's venerable Brooks Bros., says, "At Brooks, we never use the word fashion." Another sizable retailer says, "We keep saying that men are interested in style, but they don't give a damn about it."

As for the continental style specifically, "Too tight and too theatrical for us," says Irving R. Shampain, of Neiman-Marcus Man's Store. Neiman-Marcus did give it a chance, with a couple of ads and window display, but it caused "hardly a ripple among our customers."

At the other end of the income scale, Harold Rosner, president of Robert Hall Clothes, feels the hoopla about styling is much ado about nothing. The big department stores, too, tend to play down the importance of style.

• **Optimists**—Yet, for all the hard core of conservatism, Hart Schaffner & Marx feels the continental look is important.



Kestnbaum reckons it will account for between 5% and 10% of sales by fall. Witty Bros., manufacturer and retailer, says it represents perhaps 5% of its business at retail now. Witty Vice-Pres. Louis Scalise adds that continental details will show up on conventional suits to broaden the impact.

Interest isn't limited to any one area. Roos-Atkins of San Francisco this week kicked off a big promotion of the continental look. Gordon Knight of that store feels that men are already highly style-conscious. Last week, Detroit's Harry Suffrin Men's Stores introduced the continental look with a "Salute to Italy" week, featuring designer Tony Petrocelli.

Saks Fifth Avenue is a particularly enthusiastic backer. "A substantial, though not the major," part of its sales are of continental suits, says buyer Nicholas Straus. He thinks Saks has been successful partly because it sells high-priced goods. "A man who pays \$180 for a suit can afford to buy something different."

Yet price isn't the only guide. The swank Viennese tailor, Knize, uses continental details in its high-priced output. Petrocelli Clothes, a relatively high-priced manufacturer that has been pushing the Italian continental for several years, now turns out 22% of its output in this shape. Even Robert Hall finds its modified version sells in the big cities.

Antitrust Gets New Role as Key

The line of racketeers parading before the McClellan investigating committee over the past two years would stretch from the hearing room to a federal penitentiary. But federal prosecutors have had hardly any success in getting the long line through the penitentiary door.

In fact, only a few of the scores of witnesses charged by the Senate group with corrupt activities have felt any legal sting at all. By far the most notable legal action was the conviction of Dave Beck, former president of the International Brotherhood of Teamsters, for income tax violations.

In other cases, prosecutors have used the Taft-Hartley Act, the Hobbs Anti-Racketeering Act, and criminal statutes against bribery and wire tapping in moves against committee witnesses. But their efforts have met with little success.

Now the Dept. of Justice is taking a new tack. It is going after racketeers with a law that, up to now, has been reserved mostly for use against businessmen—the Sherman Antitrust Act.

The examples in the table opposite are but a fraction of the McClellan committee record of cases in which the committee charges that racketeers have invaded and milked legitimate business. These cases all contain elements that may make them—and many others like them—susceptible to prosecution under the Sherman Act for restraint of trade.

I. The New Approach

At the moment, 10 grand juries across the country, including New York, Omaha, and Chicago, are hearing from Justice Dept. prosecutors evidence that the department claims fits the Sherman Act definition of collusion or coercion resulting in restraint of trade. The first indictment is anticipated from a New York grand jury probing racketeering in the garment industry.

Conviction under the Sherman Act carries a maximum penalty of one year imprisonment and a \$50,000 fine on each count.

- **Careful Steering**—But in using the Sherman Act, Justice prosecutors must carefully avoid trampling on labor territory exempted from antitrust restrictions—the area in which unions are promoting their own legitimate interests through bargaining, strikes, even boycotts in some cases, and other legal economic weapons.

Atty. Gen. William P. Rogers is quick to point out that the campaign is not aimed at union officials engaged in legitimate union activities as such, but at racketeers who may use union fronts to promote their rackets.

But Rogers says: "If a labor official restrains trade under the guise of union activity, it's a violation of antitrust as much as if it's done by a businessman."

- **New Angle**—Sherman Act prosecutions of unions are not new. Since 1953 unions have been prosecuted 17 times for collusion with management to freeze prices or carve out restricted business territories, for refusal to use cost-saving equipment, and so on.

But it's a new conception, or at least a new practice, to take this route after a racketeer who has a more direct approach in restraining trade. McClellan committee evidence discloses several ways in which he can do this—for example by setting up a business that secures favored contracts because of his union connections, or by using or threatening violence to muscle in on good business territories.

- **Well-Prepared**—Months of preparation by a specially organized team of lawyers have already gone into the antitrust campaign. The department strategists, headed by Criminal Div. Chief Malcolm Anderson, count on several key factors to aid their cause:

- Witnesses reluctant before the committee may be persuaded to talk because of the immunity from prosecution granted in antitrust cases.

- Racketeers who have learned to be sophisticated about internal revenue prosecutions aren't so familiar with antitrust laws. The department hopes to catch them off guard.

- There's one encouraging precedent. Though it's denied publicly, the No. 1 racket target is Teamster Pres. James R. Hoffa, who successfully survived two recent criminal prosecutions. The only court defeat sustained by the Detroit labor leader came in a 1940 case charging an antitrust violation in aiding an association of waste paper dealers against independents. Hoffa entered a plea of *nolo contendere* (or "no contest," but without admission of guilt).

- **Frustration**—The 46-year-old Hoffa is certain to be a target in the antitrust campaign. The failure to snag him in the two earlier prosecutions—one on charges of bribing a McClellan committee staff investigator late in 1957, the second on charges of illegally tapping the wires of union associates—was the cause of much frustration and acrimony over failure of racket prosecutions.

More recently, West Coast Teamster and Hoffa associate Clyde Crosby won a directed verdict of acquittal on charges of perjury before the committee, and Teamster Vice-Pres. Einar Mohn and others were found not guilty of contempt of Congress for refusing to testify. James G. Cross, head of the AFL-

CIO-ousted Bakery Workers, was freed on perjury charges.

- **Why Not Sooner?**—If racketeers have been violating antitrust laws by strikes or boycotts for "protection" money or by keeping new business out of a "friendly" management's territory, why haven't they been prosecuted before?

In large part, this has been due to the sensitive political issues involved, mainly the question of just how far the exemption of union activities from antitrust prosecution extends. Unions are exempt only "for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection." But where a union's own interests leave off and commercial restraint enters has long been in dispute.

II. Campaign Strategy

When it comes to the particular cases to be prosecuted, Justice Dept. officials are keeping mum. But it's known they've been at work in the New York garment industry, and in the garbage collection business in Los Angeles.

The latter case may be a good example of the department's antitrust concern. McClellan committee evidence disclosed that Teamster Local 396 had a "pernicious monopoly" within the San Fernando Valley Rubbish Collectors Assn. Prospective operators in the area were forced to join the association, and their workers had to join the local. Employers who didn't comply with association rules were named on a "hot sheet," which the Teamsters enforced.

- **Example**—McClellan committee investigators who have been working with Justice Dept. attorneys cite one case as an example of the aim. It's a 1945 case known as *Allen-Bradley Co. vs. Local 3 of the International Brotherhood of Electrical Workers*. The local and New York City electrical contractors agreed that equipment would be purchased only from New York manufacturers who had closed shop contracts with the union. The court found the parties guilty under the Sherman Act not just of this single violation but because they were "one element in a far larger program in which contractors and manufacturers united . . . to monopolize all the business" in the city.

There's one hitch—the extent of the collusion—that may make McClellan committee cases difficult to prosecute under antitrust. Other prosecutions have been lost because the courts found collusion was not proved. But the approach of prosecuting gangsters for obtaining business by coercion may get around this difficulty.

Weapon in Drive on Rackets

The Justice Dept. is looking at...

These Industries ...These People

JUKE BOXES

Fred T. Smith, former business agent of International Brotherhood of Electrical Workers

SERVICE STATIONS

Teamsters Dave Beck and Frank Brewster

SMALL BUSINESS OPERATORS

Johnny "Dio" Dioguardi and Anthony "Ducks" Corallo

TRUCK LEASING

Teamster James R. Hoffa, Josephine Poszywak (Mrs. Hoffa), and Alice Johnson (Mrs. Bert Brennan)

GARBAGE COLLECTION

Teamsters Local 396 and San Fernando Valley Rubbish Collectors Assn.

CONSTRUCTION

Operating Engineer's ex-Pres. William L. Maloney and S. A. Healy Co.

INDUSTRIAL LAUNDRIES

Teamster Frank Kierdorf and Star Coverall Co.

TRUCKING

Teamsters Local 886 and Galveston Truck Lines

...These Situations

McClellan committee charges that Smith was "enforcer" for gangster-run amusement machine concern, the Chicago Independent Amusement Assn., Inc. The plan was to protect juke box operators from their competition and to carve out territories. The association paid dues to Smith, amounting to \$15,800 in 1956, none of which went to the union. The association and union worked out of same office.

McClellan committee charges that Brewster and Beck had "hidden ownership" of Standard Service Tire Co. (a service station in Seattle) "so close to Teamster headquarters that hardly any union business agent could resist passing by the station and filling his gas tank." "The irresistible urge of Teamsters to do business there" brought the Teamsters' bill from 1950-55 to \$164,589.76.

McClellan committee charges Dio and Corallo with bringing 40 gangsters into a United Auto Workers-AFL local in New York, breaking up into Teamsters' "paper locals" to control jewelry, car wash, and hundreds of small shop businesses in New York by "extortion, bribery, and collusion with management" by substandard, "top-down" contracts with employers. Secy.-Treas. Anthony Doria permitted gangsters to take \$360,000 of UAW-AFL's funds.

McClellan committee says that the "most successful" of Hoffa's business ventures was Test-Fleet, Inc., that "from its inception was in collusion with a Michigan trucking employer." Test-Fleet aided Commercial Carriers Corp. in Flint to settle dispute with Teamsters, and was then set up under maiden names of Mrs. Hoffa and Mrs. Brennan. Commercial Carriers then awarded Test-Fleet the contract for hauling Cadillacs. Over seven-year period, the profit to both was \$125,000.

Los Angeles Police Dept. Capt. James R. Hamilton told McClellan committee details of employer-Teamsters collusion and control over garbage collection in area.

McClellan claims that Healy "received special concessions on union contracts" — including no overtime on Healy projects in Chicago.

McClellan committee alleges that Kierdorf put pressure on auto shops in Detroit to use laundry said to be run by Angelo Meli, who has Teamster connection.

Desmond A. Barry, Galveston president, testified that other trucking employers and Teamsters were banding together to try to force Galveston to sign a union contract.

Antiques Hobby Gets a New Lift



BULL'S-EYE MIRROR, Americana circa 1810 and priced at \$750, is on display at the New York Coliseum Antiques Fair. The show, which contains items ranging from 35¢ to thousands of dollars, attracts all level of buyers as well as dealers and collectors. Theme of the show is "Americana," stressing the trend toward Pennsylvania Dutch and "Wild West," with more subdued New England for the first time in the background.

For a growing number of people, an antiques show is an exciting event—whether it's a "supermarket" like the one running this week at New York's Coliseum (pictures) or a lesser production staged in a country barn.

For dealers, some of whom set up their aging wares at as many as 30 or 40 shows a year, it's a chance to reap profitable sales, meet new customers, and get their names before the public.

For collectors, the antiques show is a place to gossip, trade, and perhaps acquire a "piece."

For neophytes—particularly young couples in a nesting mood—it's a good place to catch the bug. The effect of such shows on this group has brought about some far-reaching changes in the antiques business. Beguiled by the atmosphere, and feeling assured of getting an authentic piece, new converts have gone on a rampage.

• **Facts and Figures**—The results are happy ones for antiques dealers, and some figures show why. In New York, there are over 1,000 dealers compared with a few hundred 10 years ago. The Winter Antiques Show in New York last January drew 30,000 compared with 16,000 in 1958. At this week's Coliseum Antiques Fair, dealers' sales are put at a conservative estimate of \$500,000 to \$750,000—about 10% higher than sales at the same show four years ago.

• **Tight Market**—"Selling is the easiest part of the business," says one dealer, "but buying is getting extremely difficult." For example, a Post-Revolutionary War McIntire sofa could be purchased 10 years ago for \$5,000. Today, the price is between \$8,000 and \$10,000. Over the same period, dealers' markups—about double—haven't changed much.

• **Trends**—"Antique" can mean anything old, though most connoisseurs agree that it takes 100 years to make it official. But even relatively young antiques have been pushed up in price by demand. A Lutz vase that cost \$10 in 1950 now fetches \$100.

Today's demand is taking a definite turn toward "Americana," the theme of the Coliseum show. Many European antiques are still highly prized, of course, but collectors are turning to Pennsylvania Dutch and "Wild Western." Both are busy, colorful, and distinctly different from the subdued antiques of New England.

The reasons collectors collect are as varied as the periods of art themselves. The most fashionable explanation these days is that it's a hedge against inflation.



NEWPORT QUEEN ANNE chairs cost \$5,000 for set of six. Cherry pie-dish table, also of 1720 period, has a \$1,500 tag.

MOVIE machine made in 1895 and costing \$250 isn't hand-crafted, or old enough, so doesn't qualify as an antique.



POTPOURRI of 18th and 19th Century porcelain and glass pieces includes a set of French Empire candlesticks.



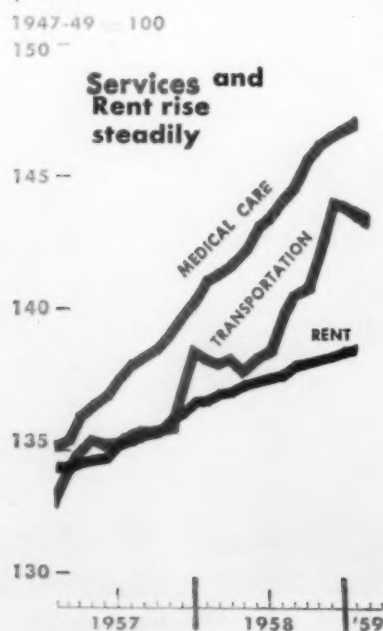
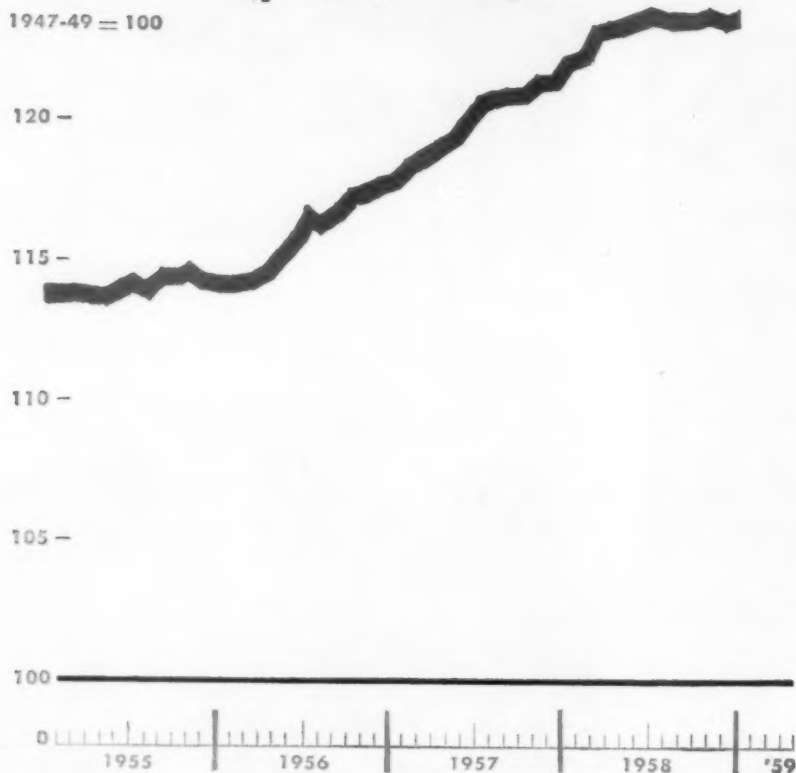
CARVED wooden monkey used to stand outside shops in Venice holding shopkeeper's cards. The frog is a dealer's touch.



STAFFORDSHIRE teapot of early 1800s, tagged at \$75, catches the eye of a young collector of antiques.

Why Inflation Is Fighting Word

Cost of Living Prices: Up 1.2% in a year



Data: Bureau of Labor Statistics.



©BUSINESS WEEK

The figures show that many prices went up, others didn't; these spotty movements leave ample room for arguments.

Just about anywhere you go these days, the talk will turn to inflation. The subject comes up with friends at cocktails, in brokers' board rooms, and among businessmen who feel a responsibility to avoid price increases. And it's still a central problem in the high places of government. This is highlighted by the new increases in the Federal Reserve Banks' discount rates (page 174) and bitter controversy in the joint House-Senate Committee on the Economic Report (page 35).

You usually discover that you and your neighbor and your congressman don't agree on a definition of inflation. You may find that one is talking about past price increases and another about the future potential. But talk they will.

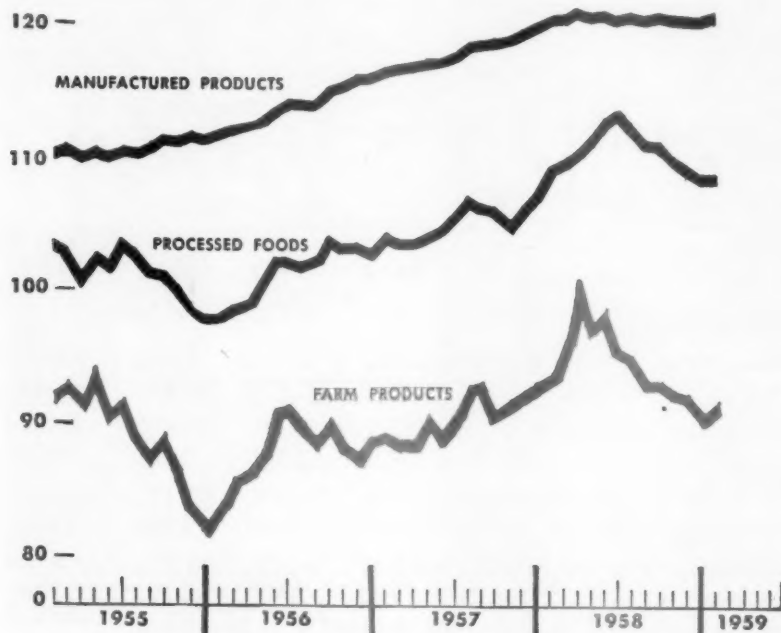
• **Some Up, Some Down**—The charts on these pages show clearly enough why there is room for disagreement. The cost of living did go up during late 1957 and early 1958—when the business recession had become pronounced and unemployment was mounting. That gave rise to complaints about "the correction that didn't correct." Food prices rose rapidly because severe weather curtailed supplies. And the "constant escalators," such as rent and the long list of personal care and service items, went on rising.

But it is equally clear that prices of factory products contributed little to the rise in the cost of living; the costs of apparel and of home furnishings and appliances were declining.

The same contradictions appear in the spot markets for raw materials and at the wholesale level (charts, right). Here, too, another characteristic of post-war "inflation" shows up: The farther you get back toward the mine and the farm, the more readily prices swing with changes in supply and demand; it's along the line to market, as a greater and greater element of labor and transportation cost becomes frozen in, that the rigidities are introduced.

• **CPI's Showing**—If the Consumer Price Index—commonly called the cost of living—is the telltale, then there hasn't been much inflation for the better part of a year. What inflation there was in late 1957 and early 1958 was almost entirely due to a temporary rise in food costs. And, because meats are expected to be plentiful through most of this year and into 1960, the experts doubt much of a rise is in the cards now.

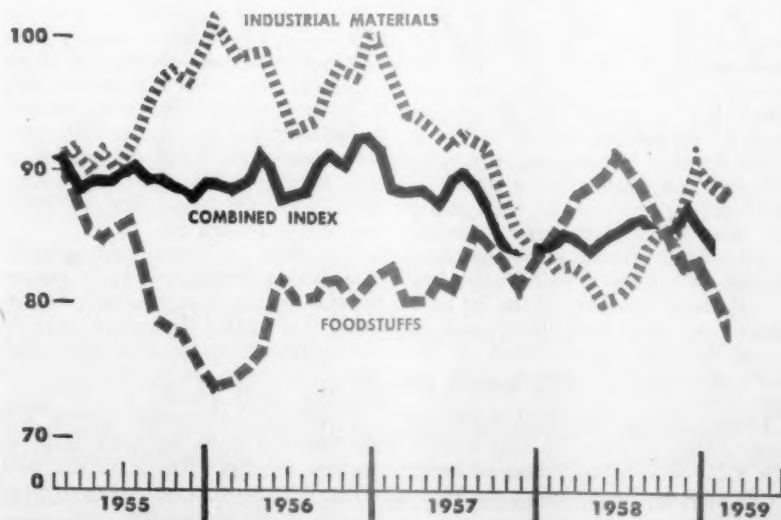
1947-49 = 100 **Wholesale Prices:**
130 — **Farm products are sharply down**



Data: Bureau of Labor Statistics.

Raw Materials Prices: Diverging into balance

1947-49 = 100
110 —



Data: Bureau of Labor Statistics.

Economics Report

Joint Congressional Committee deeply split as Democrats assail Eisenhower on fears of inflation.

The sharpest partisan clash over economic policies in years erupted this week in the usually sedate Joint Economic Committee of Congress.

The committee sent its annual report on the state of the economy to Congress, with the Democratic majority unanimously calling for higher spending, easier credit, faster growth, and a stepped-up attack on unemployment. They accuse the Administration of weakening the country's military and economic strength by being overly nervous about inflation.

Republicans on the committee countered with a charge that the Democrats are "cursory," "confused," and inspired by political motives.

• **Split View**—To highlight the split further, Sen. Jacob K. Javits (R-N.Y.) dissented from the Republican views seven times in seven pages and attached a statement of his own calling for "a little loosening of the budget."

The report is made annually by the committee after hearing testimony by government officials and private economists. The object of them all is a study of the President's annual Economic Report to Congress.

In recent years the committee has tended to substantially unanimous reports, on the theory that there should be no dispute over basic economic fact.

This year, political feuding shows on practically every page.

The chief Democratic accusation centers around the inflation issue and Pres. Eisenhower's efforts to hold the line on federal spending. Experts before the committee agreed that the 1959 outlook is for stable prices, and for a rate of growth that will leave substantial unemployment and unused industrial capacity at yearend.

• **Need Spur?**—The Democrats argue that this calls for greater emphasis on growth, and less on fears of inflation.

Growth projections prepared by the committee professional staff based on Administration's figures indicate that the pace of business recovery will become markedly slower this year than in the second half of 1958.

The staff, the professional economists who testified, and the Administration all expect gross national product to climb from \$437.7-billion last year to an average of about \$473-billion for 1959 with something like \$480-billion to \$485-billion in the fourth quarter.

The committee staff concludes this

will cause only a small cut in the seasonally adjusted rate of unemployment—which has been running around 6% (page 27).

• **What to Do**—In the light of this expected slackness, Democrats argue that Congress should appropriate whatever it decides is necessary, both for defense and civilian projects, without worrying about the inflationary consequences.

All the Republicans except Javits call on Congress to hold spending to the Eisenhower levels, arguing that in fiscal 1960—ending in June next year—the economy will be pushing into new highs for employment, production, and purchasing power. As they see it, failure to balance the budget can therefore “be expected to have prompt inflationary consequences.”

• **Credit Control**—A similar collision occurs over monetary policy.

Democrats warn that a continuation of “the present degree of restraint” may curtail business expansion, especially in housing later in the year, state and local government projects, and small business. They complain that since 1954 the money supply has increased at an average annual rate of only 1.5%.

The majority contends “that with substantial idle capacity and unemployment remaining in the economy, expansion of the supply of money and credit, if properly managed, need not carry the threat of renewed inflation.”

The Republicans were particularly harsh in their rejection of this section. They point out that the money supply was increased by nearly \$6-billion—well over 4% last year. They call the Democratic argument for easier credit “completely unacceptable.”

This clash on credit policy was sharpened by the announcement by the Federal Reserve last week of a rise in the discount rate at four district banks (page 174)—a credit tightening move that immediately drew complaints from Democrats in Congress.

• **Growth Rate**—Five of the six Republicans come stoutly to Eisenhower's side on the over-all importance of fighting inflation. They argue that growth last year out of the bottom of the recession “was probably the most rapid and intensive for any equally short period of time in our nation's history.” Slower pace, they imply, is now entirely justified. Political debate over whether any given growth rate is attainable is brushed aside as absurd, in light of the doubts of professional economists on the whole subject of expansion.

But no matter what the growth rate, they maintain that the problem is not to choose between a sound dollar and a high rate of growth. On the contrary, they rate price stability as a “basic requisite for continuing growth.” They appeal to Congress to adhere to the

Eisenhower budget and to support the restrictive credit policies of the Federal Reserve.

Javits rejects the view of the GOP majority that inflation is the chief threat to growth.

• **Tax Reform**—Democrats in their section of the report urge immediate tax reform, where Eisenhower wants to wait until a budget surplus is in sight. They

do not list specific proposals, but talk in general terms about the importance of broadening the tax base, encouraging venture capital, and fostering economic growth.

Republicans are more specific. They argue that the tax law is biased against capital accumulation. But they do not take issue with Eisenhower's decision to postpone changes.

Consumer Buying Plans

Percentage expecting to buy and median amount they expect to pay

	1955	1956	1957	1958	1959
Houses (nonfarm)	9.4%	9.4%	8.7%	7.5%	9.3%
New cars	8.2%	8.4%	8.5%	6.9%	7.6%
	\$2,800	\$2,810	\$2,920	\$2,840	\$3,030
Used cars	7.5%	7.2%	8.4%	10.4%	9.8%
	\$810	\$800	\$890	\$910	\$860
Home impvts. and maintenance (nonfarm)	22.0%	22.2%	23.4%	22.1%	24.6%
	\$330	\$370	\$460	\$380	\$360
Furniture and major appliances	28.5%	28.0%	29.4%	28.2%	27.8%
	\$290	\$290	\$300	\$290	\$280

Data: Federal Reserve and Survey Research Center, Univ. of Michigan.

© BUSINESS WEEK

More Hope, More Buying

Fed survey finds consumer optimism up since year ago, with a modest rise in spending plans.

The consumer continues to make dogged, unspectacular headway along the road to more ambitious buying intentions.

This came out of the latest Federal Reserve System survey. The Survey Research Center of the University of Michigan interviewed consumers in January and February of this year. Released last week, the survey covered some 2,550 families.

The researchers turned up a consumer who feels considerably better about his own business prospects for the coming year than he felt a year ago. It found, too, a modest increase in buying plans for the next 12 months (chart). Add up all those who expect to lay out money on substantial items, and it comes to 50%, a little ahead of the 47% who had such buying plans in early 1958.

• **House and Car**—The most impressive jump occurs in plans to buy houses. The 9.3% who have a house in mind for the coming year is close to the 1955-1956 levels.

The total number who expect to buy a car is just about the same as a year

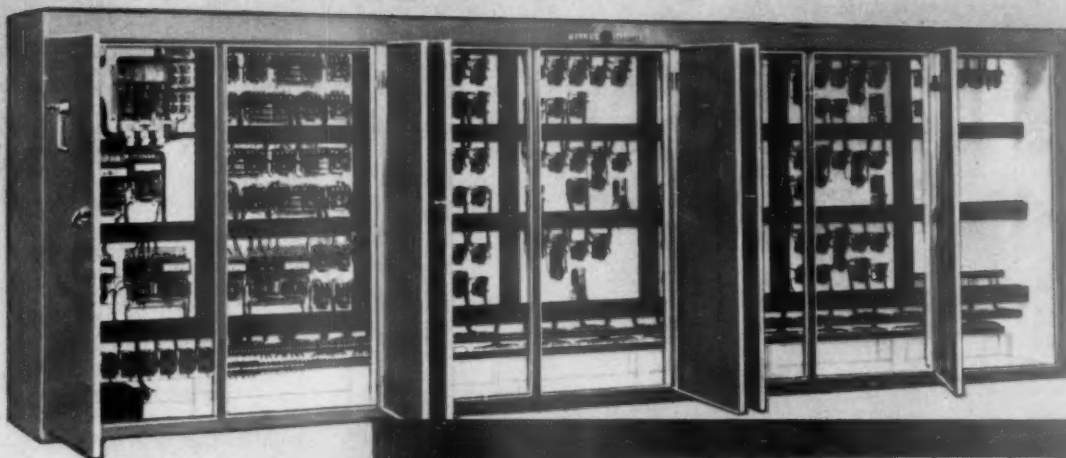
ago. The used car still has more adherents than the new. But it may be significant that what gain there is this time is on the new car side. This reverses the pattern that the Survey Research Center found in its privately financed interim study last fall (BW—Dec. 6 '58, p19). Then it discovered “clear indications of some shift in interest from new to used cars.”

This year's reversal in favor of the new car may have new meaning when you look at the median amount people expect to pay. New cars are the only wares for which consumers expect—realistically—to pay more than they stated last year. Whatever kind of car they have in mind, a \$3,000 median price does not sound like a “little” inexpensive foreign car.

The flurry of home improvements that also manifested itself in the interim surveys—in part as a substitute for the house they wanted but couldn't afford—shows distinctly in the latest study. But here, consumers have lowered their spending sights a little.

Furniture and appliance people will not find too much to cheer about in the new findings. This is the one field where intentions to buy were reported less frequently than a year ago.

• **Optimists**—Once you look beyond the buying intentions, the note of optimism



This special control panel is used with the automatic transfer machine (right) built by Bausch Machine Tool Company. All Allen-Bradley components in this "special" panel are standard catalog items.



For maximum reliability
more and more companies specify...

ALLEN-BRADLEY Quality Motor Control

The amazing record of dependable performance which has been established by Allen-Bradley motor control over the years makes it *preferred* by *designers*—as well as *users*—of automatic production machines of every description.

Allen-Bradley solenoid type starters, relays, and contactors have only ONE moving part. This remarkable simplicity of design is your assurance of *millions of trouble free operations*.

For instance, there are no bearings to corrode or stick, no flexible jumpers to break. In addition, the double break, silver alloy contacts—used throughout the Allen-Bradley line—never need servicing. They remain in perfect operating condition until completely worn away.

To keep production rolling on *your* automatic machines... insist on Allen-Bradley... the *quality* motor control. You cannot do better.

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis. • In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

Another automatic production machine "goes Allen-Bradley"

sings out strongly. The proportion who feel better off than a year ago climbed appreciably—from 32% last year to 38%; those who feel worse off dropped a little, from 31% to 25%. Some 40% reported they are making more than they were a year ago, against 36% who replied this way early last year.

The tide of optimism about the future is stronger, too. Those who expect to be making more a year from now hit 42%, against 37% who were hopeful on this score last year. It was the highest ratio to expect improvement in a decade of Januarys.

Even greater is the jump in optimism about general business conditions. In early 1957, this hit a year-to-year high of 60%. It fell off with a plunge in early 1958, to 31%, a low. By this year, consumers had recovered spirit to the point that 55% now look forward to good times in the next 12 months, and those who expect bad times dropped as sharply, from 41% to 17%.

At this point, though, it is interesting to note that the 55% of hopefuls represents a slight drop from the 60% who looked forward to good times last November. Some consumers have evidently had second thoughts on the speed with which we would come out of the recession.

- **Wherewithal**—Nevertheless, these "attitude" findings are encouraging. They help explain the moderate improvement in buying plans. The survey turned up little change in another factor that could have some impact on buying: the amount of liquid assets consumers hold. The same proportion—26%—have none as had none a year ago. This is a smaller percentage than the 29% who had no liquid assets early in 1955. The next largest group—those with assets of between \$1 and \$199—was somewhat larger than the year before: 19% now vs. 17% then. Hardly any year-to-year changes showed among groups that had still more assets.

- **Prices**—Taken with other economic indicators, the current survey points to a moderate but by no means majestic pickup in 1959. But the Survey Research Center has been waving one warning flag at marketers during the past year. Both in June and in November, 1958, consumers repeatedly expressed ire at high prices, a resentment that may have restrained their buying.

If this assessment is correct, then marketers still face a stiff obstacle. For the number who expect prices to rise during 1959 was a hefty 61% this January—against 48% who felt so the year before. At some point, of course, this ire may turn to resignation, and a feeling that buying times aren't going to get better could turn around and spur people to spend their cash. Whether that time has yet come, only the year can tell.

Oil Import Curbs With Teeth

Eisenhower clamps on mandatory controls, with substantial over-all cut in view, as domestic producers carry day; but court test by disappointed major importers seems sure.

A long awaited decision by Pres. Eisenhower this week signaled one of the most significant government actions in behalf of a domestic industry in recent memory.

With a stroke of his pen, the President clamped mandatory controls on imports of oil. The impact and wide repercussions of his decision were immediately evident:

- The program envisions a substantial reduction in the flow of imports—from about 2-million bbl. a day in late 1958 to a new level of less than 1.5-million bbl. daily. Residual fuel oil and finished products now come under restrictions along with crude.

- The decision represents the stiffest and most far-reaching economic regulation of the oil industry in peacetime U.S. history. Domestic producers, who for decades have opposed any high level of imports, have won a major victory.

- Pres. Eisenhower tossed a surprise warning on pricing to the oilmen. The domestic industry has generally dismissed the theory that government control over imports might eventually lead to further government control in the form of total price regulation in the industry. Yet Eisenhower ordered the Office of Civil Defense Mobilization to act as watchdog on any price increases. He told Administrator Leo Hoegh to determine whether any increases are defensible, thus raising the threat of regulating prices by permitting more imports.

A court test of the President's authority to invoke mandatory quotas seems sure. Major importing companies, with heavy investments in foreign producing areas, were angered that the new program made no permanent concessions to their historic position. The defunct voluntary program gave them an inside track on imports, and for six months that position will be recognized, on a modified basis. After that, they will have to get in line on the same basis as nearly all other U.S. refining companies. So an injunction suit by one or more importing companies is in the cards.

In addition, the State Dept. is bracing itself for some white-lipped protests from foreign oil-producing countries—especially Venezuela, and to a lesser extent, Canada.

- **Mixed**—The President's action was received in Texas, heart of the domestic industry, with a mixture of jubilation and misgiving. Gen. Ernest O. Thomp-

son, chairman of the Texas Railroad Commission, said regulatory authorities can now know "for sure, for the first time, how much oil and petroleum products will be imported." Houston oilman P. H. Rutherford called the order a "real hypo to the little independent."

But Olin Culberson, member of the Texas Commission, said the cut in imports would be "nothing to crow about." And in most of the industry comment there was an undertone of regret that the "industry couldn't do it by itself" and misgiving that "it might mean still more control."

Congress will be content to let the Administration carry the ball, unless the courts upset the mandatory program and the controversy drops back in Congress' lap. There is already some sentiment in Congress for a specific quota law for oil.

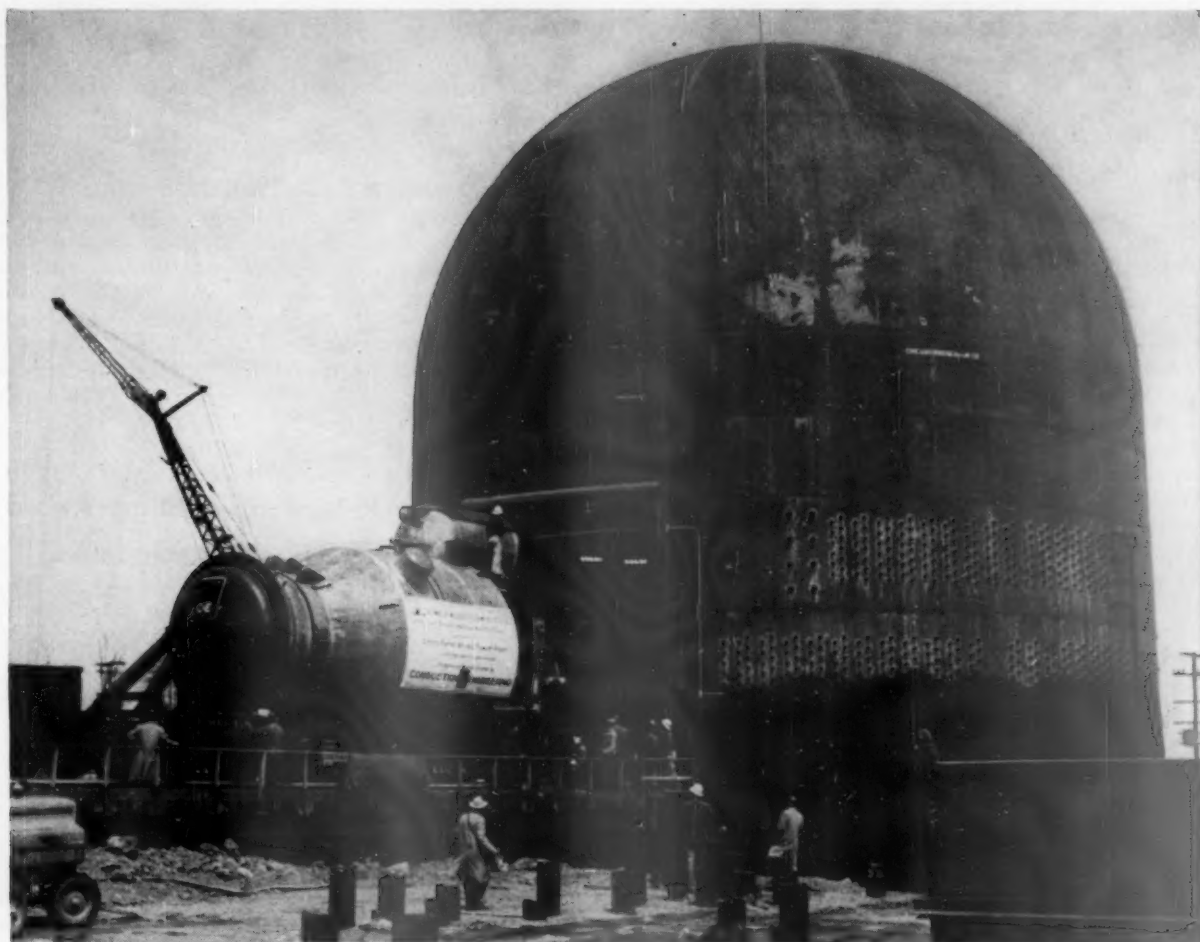
- **How It Works**—Under the mandatory program, all U.S. refiners importing crude oil and its main products must get allocations and licenses from a new Interior Dept. agency, the Oil Import Administration. Allocations will be given on a basis of 1958 refinery inputs, under a complex sliding scale formula. Any import shipment in excess of a company's quota would be held by customs men at the port of entry.

Most of the cuts will be in imports of finished products—gasoline, kerosene, and so on. These averaged 60,000 bbl. a day in 1957, jumped to about 300,000 bbl. a day late in 1958 when the voluntary program covered only crude and unfinished oils.

Imports of unfinished oils—fuel requiring further refining—will also be cut. Imports of crude and of residual fuel oil are expected to stay at about current levels.

Specifically, imports of crude and unfinished oils are limited to about 750,000 bbl. a day in the 43 states east of the Rocky Mountains; and imports of finished products, not including residual fuel oil, to about 53,000 bbl. a day in this area. About 400,000 bbl. a day of residual will enter East Coast ports. Far Western states are held to about 195,000 bbl. a day of crude and product imports, plus a small amount of residual fuel oil.

Controls on all except finished products went into effect Thursday. By Apr. 1, the entire program will be in operation.



Atoms for Peace. This dome houses the 91-ton reactor vessel made of nickel-containing stainless steel for the new Enrico Fermi Atomic Power Plant on the shore of Lake Erie near Monroe, Michigan. Detail design and con-

struction of the reactor vessel was done by Combustion Engineering, Inc. Plant will be built and operated by Power Reactor Development Company from designs supplied by Atomic Power Development Associates, Inc.

Atomic reactor "breeds" its own fuel

*Stainless steel vessel must withstand
high temperatures and corrosives*

The world's largest full-scale nuclear reactor of the "fast-breeder" type is now being built. It may well answer the question:

When will atomic power be competitive with conventional methods of producing electric power?

As the term "fast-breeder" indicates, the atom-splitting process is maintained by so-called fast or high-energy particles. It produces more nuclear fuel than it consumes. The fast-breeder actually turns out a kilogram and a fifth of new fuel for

each kilogram it burns up!


The "breeding" takes place in a 36-foot high pressure vessel. Here, the high-energy particles (neutrons) travel at speeds of thousands of miles per second to keep the atom-splitting chain reaction going.

Accent on safety. A major objective was to make this reactor vessel safe. That called for a lot of highly specialized work.

It also called for a rugged metal: one capable of withstanding the tremendous heat given off in nuclear fission, and of bearing up under the temperatures and corrosives en-

countered. The final choice? Strong, corrosion-resisting Type 304 stainless steel. It's a stainless steel that contains Nickel — one of the big reasons for these superior properties.

How to "fast-breed" ideas. Problems involving reactor materials may never be a concern of yours. But you can run into metal selection problems involving corrosion, pressures, high temperatures and other destructive conditions almost any time. When you do, remember there is a good chance that a steel containing Nickel will provide the properties you want. Let us help you find out.

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NICKEL MAKES ALLOYS PERFORM BETTER LONGER

In Business

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SEC Drops Actions Against F. L. Jacobs Co., Puts Monitors at One-Time Guterma Base

The fog lifted this week from one corner of the murky case of Alexander L. Guterma (BW-Feb.21'59,p27), when the Securities & Exchange Commission withdrew all its court actions against F. L. Jacobs Co., a Michigan auto parts maker that Guterma had used as a base for his elusive financial operation.

SEC agreed to halt its actions in a last minute compromise reached in the chambers of a federal judge. In exchange, F. L. Jacobs agreed to add three public members to its board, including Lazarus Joseph, former New York City comptroller. SEC says the three will act as monitors, with all-out veto and investigative powers. A lawyer described the arrangement as a receivership in all but name.

Meanwhile, a U.S. Attorney predicted that Guterma himself will be indicted by Mar. 23 on additional still unrevealed charges. He is now out on bail on a charge of violating the Federal Reserve Act.

• • •

Vanishing of the Original Edsel Setup: Now Krafve, Once Boss, Quits Ford

Gradually, every trace of the original Edsel program is vanishing from Ford Motor Co. A year ago, the Edsel Div. was abolished; last fall, the four series of cars in the Edsel line were cut to two; a month ago, word got out that Edsel eventually would become a "compact" car.

Last week, Richard E. Krafve resigned from Ford to become group vice-president commercial for Raytheon Mfg. Co. Krafve had been put in charge of the Edsel program when it got under way in 1955; as a company vice-president and division general manager, he brought the car to market in September, 1957.

James J. Nance, who took the Edsel over from Krafve, was squeezed out of Ford last fall.

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FTC Examiner Hits Pillsbury Mergers; Board Bars Thompson Products Discounts

The Federal Trade Commission made major moves on the anti-merger and antitrust fronts this week:

In the Pillsbury Co. case—filed back in 1952, as the first government action under the 1950 anti-merger law—an FTC examiner ruled that Pillsbury violated the Clayton Act when it acquired two major competitors in 1951 and 1952 (BW-Jan.2'54,p28). The examiner held that the acquisition of Ballard & Ballard Co. may suppress competition in the family flour and flour-based home mix industry in the Southeast, while the acquisition of Duff's Baking Mix Div. of American Home Foods, Inc., may tend to create a monopoly in the

nationwide home mix market. If the ruling is upheld by the full FTC and the courts, Pillsbury will have to sell all assets so that the two companies can be set up as going concerns.

The case has been extensively litigated, with assets scrambled so much and so long that FTC would set a real precedent if it could unscramble them.

In the case of Thompson Products, Inc., a Cleveland auto parts maker, FTC upheld an examiner's ruling that the company was giving illegal price advantages to GM, Ford, and Chrysler. Thompson Products was ordered to stop giving the discounts to the Big Three and to other makers of original auto equipment. FTC says the evidence shows that the auto makers, with the Thompson discounts, can resell parts to dealers at prices that cannot be met profitably by Thompson's own wholesalers.

• • •

Westinghouse, Peeved by Contract Award To British, Gets Admiralty Atom Job

Westinghouse Electric Corp.—which is protesting the award of a TVA contract for a steam-turbine generator to a British manufacturer—this week got an order from the British Admiralty for an atomic submarine engine.

The reactor and its machinery is similar to that in our Skipjack class of subs, the latest we possess. Buying the reactor will enable the Admiralty to get its first atomic sub into operation much quicker than otherwise. Full training and inspection service goes with the deal.

Westinghouse says the sale in no way conflicts with the protest that it and other U.S. companies are pressing against TVA's purchase of a 500,000-kw. generator from Britain's C. A. Parsons & Co. In the protest, it is argued that on a strictly price basis all such equipment buying by the government would be done abroad, with the result that maintenance responsibility for the power supply of major areas would eventually rest overseas.

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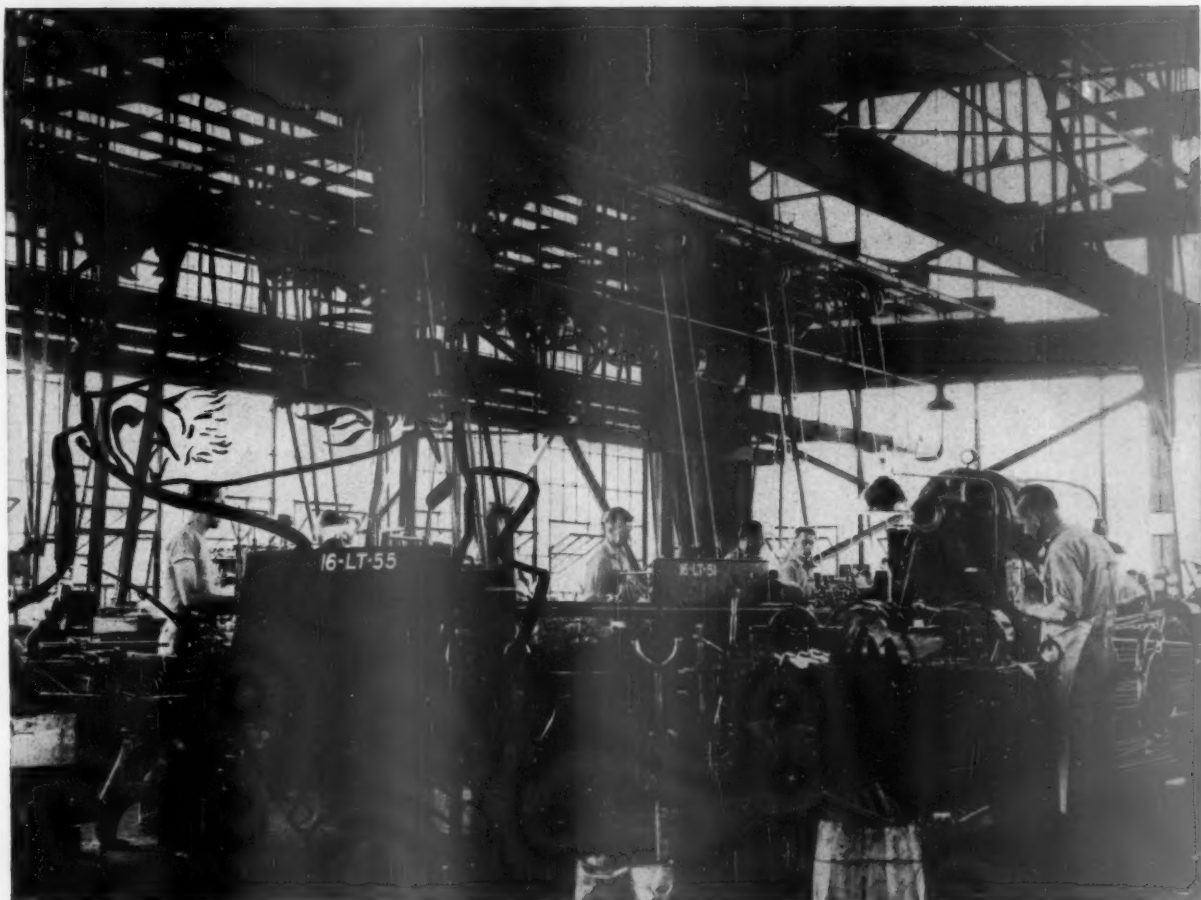
Eastern Railroads to Act on Rate Cuts To Stave Off Seaway Grain Competition

Eastern railroads virtually have agreed to cut the export freight rate on grain from the Midwest by 20% or so. The aim: to keep the business away from ocean ships that will start plying the St. Lawrence Seaway next month.

They will go through the formalities of a public hearing in Chicago Mar. 31, then file the new rates with the Interstate Commerce Commission. The lower rates would go into effect in 30 days unless ICC objected.

The roads—and East Coast ports they serve—have stood a good chance of losing considerable grain cargo to the Seaway (BW-Apr.6'57,p190). The tolls that Seaway ships must pay are not high enough to give the railroads competitive advantage.

The railroads also are concerned about ship competition for hauling general cargo for export. They are winding up studies on these, and are likely to cut some rates—individually or in unison.



Larceny and Old Lathes

Company X had a firm order on hand for the delivery of 20,000 parts per month for two years at \$1.02 selling price per unit.

Cost analyses showed that, using two machines in the shop — both relatively new — the cost-per-part was \$1.32 on one, and \$1.02 on the other.

But a new machine was available which could produce that same part for 92.5 cents, with further cost reductions obtainable through automatic handling.

The difference between the cost of filling the order on the old equipment and the new machine was \$54,818 per year. Cost of the new machine: \$30,000.

What would you have done?

That's what Company X did!

(Based on facts in J & L's files, as shown in our new movie, "The Price of Eggs".)

No other machine tool builder in the world can equal Jones & Lamson's 124 years of industry-wide experience in reducing costs and increasing profitability with the most advanced metal turning, grinding and inspection equipment.

**the man who needs
a new machine tool
is already paying for it**



JONES & LAMSON MACHINE COMPANY • SPRINGFIELD, VERMONT

Turret Lathes • Automatic Lathes • Tape Controlled Machines • Thread & Form Grinders • Optical Comparators • Thread Tools



WHAT DOES BORDEN CHEMICAL CUT IN STEREO RECORDS?

The cost! With Borden's polyvinyl chloride. Record makers sing its praises because it gives them operational stability. They get lot-to-lot uniformity, shipment-to-shipment consistency. The net result: higher quality pressings at lower cost. ★ If you are in the business of putting performance in plastics—or are in packaging,

paper, paint, textiles or forest products, chances are Borden can help you, too. Borden is a leader in resin chemistry—has the widest range of thermoplastic and thermosetting resins and polymers in the industry. Name your problem! Write The Borden Chemical Company, 350 Madison Ave., New York 17, N.Y.

IF IT'S A *Borden*  *Chemical* IT'S GOT TO BE GOOD!

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
MAR. 14, 1959



You now can count on a rise in federal spending. It won't be big—perhaps \$2-billion over Pres. Eisenhower's January budget. But the trend is on the side of mounting federal outlays.

You will see it in many places—help to states, more public works, and defense. That is the direction Washington is moving. Eisenhower's hard budget stand will be sort of a brake; it will slow, not stop it.

Note the row over defense, and how the pressure is spreading.

Eisenhower still backs his January figure, \$46-billion, for what the budget calls "major national security." The total includes more than just the Pentagon. About \$5-billion goes to allies.

Democrats say Pentagon spending isn't enough—the \$41-billion that might well be called U.S. strength. They want this upped and upped substantially.

Eisenhower says "no" to these ideas. He accepts the fact that summer might well confront the U. S. with a fighting problem over Berlin. But he still argues that no general rise in the military budget is justified. His point, as made by Administration officials, is simply this: The time allowed, between now and summer, is not sufficient to permit any great buildup in military strength. It takes months to translate appropriations into manpower and war machines. So, as the Eisenhower reasoning is pictured, you face this issue with what you have—time does not permit any great changes. Most observers here in Washington agree with this.

The Democratic argument for a buildup looks to the future. Such men as Sens. Johnson, the Democratic floor leader, and Symington, a former Secretary for Air, are well aware of the time factor.

Their point is this: The race with Russia will go on and on. So the U. S. should lift its whole defense level—start now to build a war machine that will keep the U. S. ahead of Russia, in relative strength, for the years ahead. In fact, some strong Eisenhower men in Congress wish the President would relax a bit on his budget stand and back a rise for defense.

Eisenhower is in personal charge as the European crisis develops. He is busier than in a long time, seeing more of Congressional key people and his top-level advisers in the executive branch.

The President's news conference this week was one of his best. It was a clear reflection of Eisenhower's decision to assert full personal leadership. He needled the Joint Chiefs of Staff for budgetary defections and the Democratic Congress for meeting every crisis with excited demands that the U. S. come up with new plans. Eisenhower's position: This nation and its allies have plans for meeting whatever situations may arise with whatever action seems necessary, and it cannot afford to be, and will not be, put in a position of reacting differently every time Premier Khrushchev makes a noise.

Eisenhower's own men undercut him on the defense budget.

Here's how the lobbying goes: Each chief agreed to the defense budget in writing, but noted reservations. Congress now is drawing out the reservations. As Congress draws these out, the Army, Navy, Marines, and Air Force feel freer to express their own opinions. If Congress took the advice of the "defense experts," spending would go up by about \$5-billion.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
MAR. 14, 1959

There isn't much check on the lobbying. Eisenhower can't run for reelection. This robs him of control. Defense Secy. McElroy has let it be known that he will leave shortly to return to business. So, his control is weakened.

Here's what is likely to happen on this issue:

Congress will vote an increase for defense. Eisenhower will sign the appropriation. He doesn't have to spend the money. He can hold it back if he wishes. But in doing so, he will run the risk of putting the GOP in a real hole if Russia does get tougher and tougher.

The Congress increase will approach \$1-billion. The most talked-of figure, both in Congress and at the Pentagon, is \$700-million.

Businessmen will want to watch the missile rivalry.

There's the Atlas, the first ICBM, built by a team of companies—Convair, North American Aviation, and General Electric. Interior bases are now being built; the first missile will be on operational launching pads this year.

Titan is a cousin of the Atlas. It was ordered as a "back-up" project to Atlas, is built by Martin, Aerojet, Arma, and Avco. It's a better weapon, though scheduled for later production. Now the Titan's progress proves faster than anticipated, so it becomes a rival of the Atlas for military use.

Both these liquid-fueled missiles will be produced, but in limited quantities. There is competition for orders. Tentative plans call for 90 Atlases, 110 Titans. Both are being held back, though—over Congressional and Air Force objections—because the big ICBM production push will be ultimately made on the Minuteman solid-fueled ICBM. This missile, still four years off, threatens to make both Atlas and Titan obsolete.

On the business outlook, Eisenhower and his advisers seem confident. They are more than just moderately bullish. Here's why:

A rise in capital spending is anticipated. Nothing really large is expected. Official figures coming out next week are expected to show that business investment is on the upgrade. The increase for this year may be only \$1-billion. But it will be called a trend-maker.

Inventory building is showing up in the official government figures. The interpretation is that this means the recovery will continue.

Corporate profits are showing a sharp climb. Last year, these profits hit about \$36.4-billion. Sharp pencil men in government now figure they will approach \$50-billion this year.

Wages will go up, too. This will cut profits in the second half.

Consumer spending power will gain as wages rise.

Relative price stability is expected for the short pull. If officials are right about this, then rising buying power will show up. The inflation worry reflected in Federal Reserve Board money tightening is later this year and next year.



You have to look a long way
to plan the kind of service that's building
America's second largest telephone system



**GENERAL
 TELEPHONE**

We're always on the lookout for ways to make communications more important in your daily life.

Example: we are helping to expand your telephone service. Today almost 22 million more American homes have telephones than just 10 years ago.

Example: we are helping to improve your telephone service. Today almost 36 million more American phones offer the convenience of all-dial service than just 10 years ago.

Today, because you can reach more people more easily than ever before, your telephone is worth more than ever before. And that value will be increased many times over! For Gen Tel is helping to provide new phones — new equipment — and new services.

There's a big role for communications in America's big future. We're seeing to it right now that Gen Tel will play its part well.

General Telephone Corporation, 260 Madison Avenue, New York 16, N.Y.

RESEARCH IS WHERE YOU FIND IT



A slight case of poison

A sudden mysterious "sickness" can disable a petroleum refinery, much as it does a human. Which is just what happened at this refinery.

Universal service engineers were summoned in a hurry. Samples of feedstock and catalyst were rushed to UOP laboratories, where petroleum chemists set to work. Here, the usual analyses found nothing, but specially developed analytical procedures determined the cause of the trouble—arsenic in the feedstock was poisoning the platinum-containing catalyst.

Today, in the widely-used UOP Platforming® process, proper techniques are available to assure that the feedstock reaches the reactors completely free of arsenic. The presence of arsenic in feedstock no longer prevents the effective and economical use of the process for producing high octane gasoline and high-purity petrochemicals in hundreds of refineries throughout the free world.

Many refining ideas are born in Universal's laboratories. Others, such as this, grow from problems encountered in commercial operations. But at UOP we believe that "research is where you find it." No matter where a research idea may originate, if it advances the art of petroleum technology it deserves to be carried to a successful conclusion—and to be made available to refiners everywhere.

*Trademark



**UNIVERSAL OIL PRODUCTS
COMPANY** 30 ALGONQUIN ROAD
DES PLAINES, ILLINOIS, U. S. A.

*More Than Forty Years Of Leadership In Petroleum
Refining Technology*

FINANCE

Opening Business Loan Offices

SBIC program is about ready to start supplying long-term capital to small businesses through loans and investments.

George W. De Franceaux, a red-haired, barrel-chested mortgage banker in Washington, D. C. (picture), is happily thumbing through two stacks of applications on his desk this week.

De Franceaux has every reason to be cheerful. He is branching out into a new field—as president of one of the small business investment companies soon to be federally licensed—and its success, if those two stacks of paper are any indication, appears assured when he has barely opened his door.

• **Interest Both Ways**—The first pile contains loan applications from would-be borrowers. On the first day De Franceaux moved his Allied Small Business Investment Co. into its quarters last week, he was approached for more than \$200,000 in loans. A few days later, the total had soared to more than \$2-million, far more than De Franceaux can handle at this time.

The other stack is a fistful of requests, too, but these come from several hundred investors who want to sink money in De Franceaux's new company, some applying from as far away as Florida.

What makes all this activity even more amazing is that De Franceaux hasn't even opened officially for business. His organization, like scores of others, is awaiting final clearing and licensing by the Small Business Administration. This O.K. should come before the end of the month.

• **The Idea**—De Franceaux's experience graphically illustrates the tremendous nationwide interest in small business investment companies, heralded by some as the greatest financial development in a decade (BW—Oct. 11 '58, p. 23). The idea has been sprouting since last summer, when Congress moved to plug a big gap in the nation's financial structure by setting up special machinery to help small businesses get equity capital and long-term financing on somewhat the same terms as large business.

The idea was simple: SBA would encourage private investors to support small, somewhat risky but fast-growing companies, by giving the investors numerous tax breaks as well as access to federal money. SBA has a revolving fund of \$50-million to carry through this June 30 and \$200-million to be split between the next two fiscal years.

SBICs need a minimum of \$300,000 in capital, but they can obtain half of this from SBA; to establish their loan funds, they also can borrow from SBA up to 50% of paid-in capital and surplus.

• **Cooling-Off Period**—The initial response to SBICs was terrific. In short order, SBA received 6,000 queries. Then prospective lenders had second thoughts when SBA issued its set of regulations for the new capital banks. For fear of repeating abuses under the old Reconstruction Finance Corp., SBA made the regulations tighter than most people had expected.

Prospective backers of SBICs began to wonder: Could SBICs make enough profit to be interesting when they had to pay 5% on any money borrowed from SBA, yet were limited to 7% or 8% on many of the loans they made? Were the tax advantages all they were cracked up to be? Could SBICs invest more wisely than the private "risk capital" houses after the war, which had a few successes but many more flops?

These questions cast a pall over SBICs for several months. Now, enthusiasm has built up again as the program begins to get out of the discussion stage.

• **Experienced Chief**—Part of the credit for the pickup in interest goes to the program's new director, Duncan Read (picture, page 48). Read brought SBA the professional touch it needed. A former partner of Dillon, Read & Co., New York investment bankers, Read had been enjoying the life of a small-town banker in the fox-hunt country around Middleburg, Va., before being tapped for his new assignment by SBA head Wendell B. Barnes.

Read has been shoving out tentative approvals for proposed SBICs at the rate of about one a day. At the present rate, officials expect more than 200 SBICs to be approved by yearend.

• **Big Money**—Investors of all kinds—ranging from De Franceaux, a mortgage banker, to Tulsa oil millionaires—are ready to enter the field. The Bank of America, for example, is initially setting aside \$7.5-million for an SBIC.

Over-all, say officials, SBA has been asked for approval of SBICs with a total capitalization of \$70-million to \$80-million. SBA itself has been tapped by potential SBICs for only about \$4-million.

• **Tax Break**—Aside from the chance to obtain federal funds for investment use, De Franceaux, like other "smart money" men, is attracted by the tax advantages of SBICs. For one thing, dividends on stock of small businesses held



GEORGE DE FRANCEAUX, in Washington, will operate in small business loans.

by SBICs will be tax-free, in contrast to the effective 7.8% tax rate on intercorporate dividends.

Moreover, investors in an SBIC may deduct any losses from ordinary income rather than treat them only as a capital loss. SBICs also can accumulate dividends without penalty, unlike regulated investment companies.

SBIC supporters, like De Franceaux, also seek additional tax concessions from Congress. Proposals include counting anywhere from 15% to 100% of interest received on SBIC loans as non-taxable income, and allowing SBICs to set up tax-free reserves up to the amount of their paid-in capital and surplus. Additionally, some would-be lenders are asking that the rate of interest that



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DUNCAN READ is directing SBA's small business investment company program.

SBA charges on funds advanced to SBICs be lowered. They complain that the present rate of 5% is too high to allow them a satisfactory profit.

• **Low Overhead**—This fear is shared by De Franceaux. He plans to keep his overhead as low as possible at first and to work on a limited profit margin.

His new Allied SBIC office reflects this. It's located over a Chinese restaurant behind Washington's Mayflower Hotel; it shares a suite with an Esther Williams Swimming Pool Agency, another De Franceaux venture. And its modest appearance contrasts with the fancy surroundings of his successful mortgage and realty firm, Frederick W. Berens, a block away.

• **Capitalization**—The idea of starting an SBIC came naturally to De Franceaux, who built up his mortgage business in the wake of another government financing program in the 1930s—the Federal National Mortgage Assn.

Allied is being organized with the minimum \$300,000 capital, about half coming from SBA and the rest from a local group of Washington bankers and stockbrokers.

The tie-in with local bankers should prove mutually advantageous, according to De Franceaux. If the bankers themselves can't grant long-term loans to customers, they can turn the applications over to Allied for consideration. This act of goodwill could benefit the bankers if such customers eventually wanted to use the bank for other loans.

• **Breakdown Point**—De Franceaux feels that the new operation won't really prove profitable until he has about \$2-million in capital. Then he could approach insurance companies and other financial institutions for borrowing and discounting of debentures of small business borrowers.

His aim is to keep Allied's list of investors small—he says he intends to add only about five more members. In the long run, however, he hopes to attain a \$5-million capitalization, a good part of this from the liberal borrowing from private sources that an SBIC is allowed.

An SBIC can borrow and reinvest as much as four times its capital and surplus, in contrast to regulated investment companies, whose borrowing has been limited to one-third of their total assets. Thus, even the smallest SBIC can line up an additional \$1.5-million for investment.

• **Lending Market**—"As now envisioned," says De Franceaux, "our lending would not confine itself to the Washington area. Allied will operate in the entire Mid-Atlantic region." He adds that he already has received tentative loan applications from businesses as far north as Pennsylvania and as far south as North Carolina.

De Franceaux probably won't stop there, either. He's considering setting up a correspondent system with bankers along the entire East Coast, which would expand Allied's operations greatly.

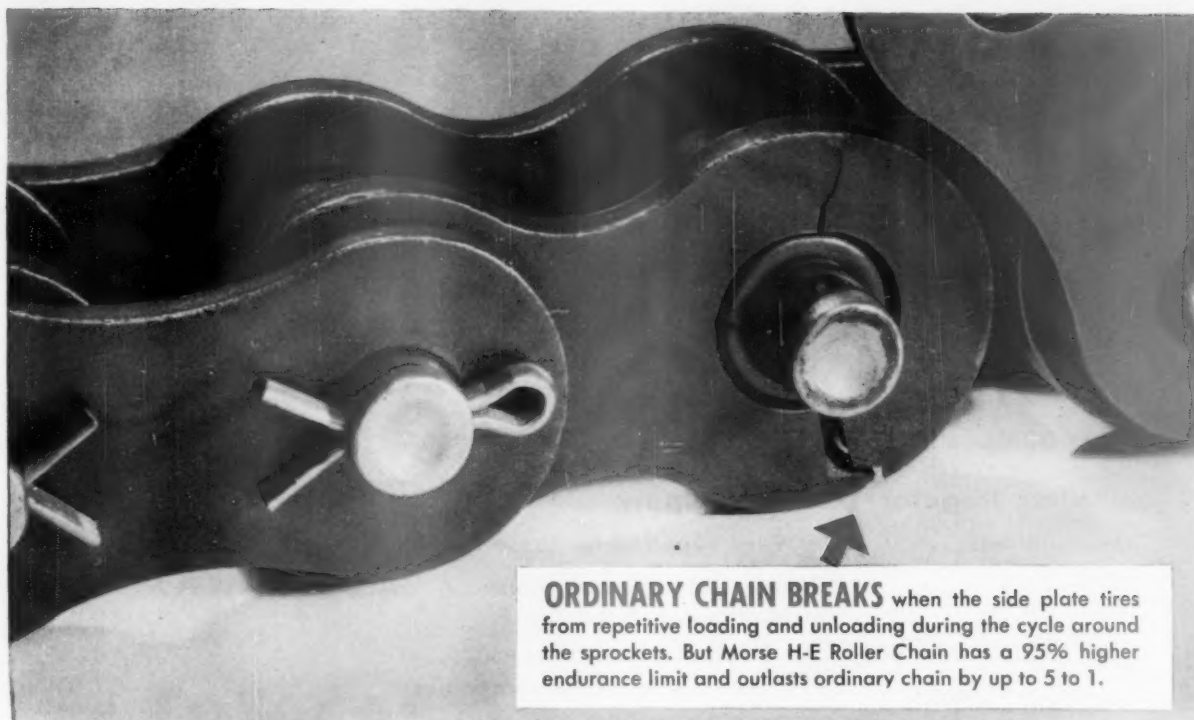
• **Growth Ventures**—For the time being, says De Franceaux, Allied will invest its limited capital more in debentures of good "growth" prospects than in outright loans. SBICs can either make loans of 5 to 20 years to small companies—defined as those with total capital of less than \$5-million—or can purchase debentures that are convertible into common stock. De Franceaux thinks debentures are the better bet at the moment, since big loans would tie up his capital too much.

On any loans he does make, repayments will be in monthly installments. In this way, the company would have a constant flow of capital coming in.

De Franceaux expects to do a lot of business with electronics and research companies in Washington that have contracts with government. Since he's basically a real estate man, he also will center a good deal of attention on real estate transactions, financing the purchase of new buildings or expanding and modernizing old ones.

• **Who Wants Funds**—Most of the small businesses that have approached him so far want to borrow from \$10,000 to \$50,000. Prospective customers include an electronic computer manufacturer that needs working capital, a foreign automobile distributor that wants to purchase a new building, and a baking company that wants funds to open a chain of stores.

For his deals, De Franceaux intends to charge a pretty good rate of interest—8% to 12%. He feels that when things get rolling, Allied ought to make 10% on its capital. **END**



ORDINARY CHAIN BREAKS when the side plate tires from repetitive loading and unloading during the cycle around the sprockets. But Morse H-E Roller Chain has a 95% higher endurance limit and outlasts ordinary chain by up to 5 to 1.

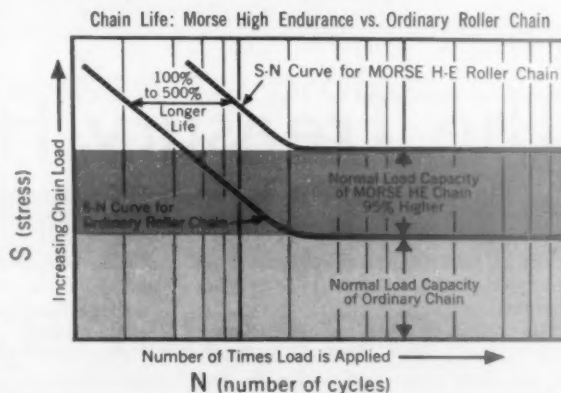
"Tired Metal"... the bane of chain now licked by MORSE H-E

Morse H-E Roller Chain has up to 500% longer service life . . . cuts replacement and labor costs

The unretouched photograph shows what happens to chain when the metal fatigues. But now a special Morse process has licked the "tired metal" problem. It gives Morse H-E Roller Chain 95% higher endurance limit . . . and up to 500% longer service life.

The special process means Morse H-E Chain costs about 10% more. But that's a small price to pay for a heavy-duty chain that can save you thousands of dollars annually in replacement costs, downtime, and wasted man-hours.

For more information on the chain that licked the "tired metal" problem once and for all, see your local Morse Distributor. Or write: MORSE CHAIN COMPANY, Dept. 3-39, Ithaca, New York. Export Sales: Borg-Warner International, Chicago 3, Illinois.



Red area: Under these chain loads, fatigue will break ordinary chain . . . but not Morse H-E.

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How Bad Will the Capital Shortage Be?

1. The Money Needed (Billions of Dollars)

LAST YEAR
Borrowers raised
these amounts...

...For these purposes

THIS YEAR

The forecasts are:

		BANKERS TRUST CO.	SALOMON BROS. & HUTZLER
\$ 9.0.....	Domestic corporate, foreign financing ..	\$ 8.0	\$ 7.9
14.8.....	Real estate mortgages	15.7	13.3
5.9.....	State & local gov't. financing	5.9	4.6
2.9.....	U.S. Treasury bond issues	?	?
32.6....	TOTAL.....	29.6	25.8

2. What Regular Lenders Supply

These amounts...

...Were supplied by these lenders

6.5.....	Savings & loan associations	6.7	5.5
2.5.....	Mutual savings banks	2.3	2.2
5.6.....	Life insurance companies	5.6	4.7
1.2.....	Fire, casualty insurance companies	1.7	1.3
2.9.....	Corporate pension funds	3.2	3.3
1.6.....	State & local gov't. retirement funds	1.7	1.6
8.4.....	Other	4.2	1.0
28.7....	TOTAL.....	25.4	19.6

3. The Extra Needed

3.9..... 4.2+? 6.2+?

(Plus Treasury's Needs)

©BUSINESS WEEK

The Treasury Holds the Key

The U. S., the world's richest nation, will be capital-hungry again this year—even hungrier than it was in 1958. In fact, the shortage of long-term funds may well turn out to be 1959's toughest financial problem.

Just how big the capital shortage will be can't be pinned down exactly as yet, and economists differ in their reading of the signs. But as the table shows, it promises to run to at least \$4.2-billion, with some forecasts raising that figure to \$6.2-billion, or even higher. That's without making any allowance for Treasury needs and for any attempts by the Treasury to draw funds from the long-term market.

• **Repeat Performance**—Early last year, while the recession was bottoming out, the demand for capital was unexpectedly high, but the supply was relatively plentiful. But the business upswing later in the year, and the continuing heavy need for funds by the Treasury and by

state and local governments, stepped up capital demands beyond what the traditional lenders could supply. The gap for the year as a whole is estimated at \$3.9-billion. And as the capital shortage developed, interest rates moved up sharply.

This year again, borrowers plan to seek more long-term funds than the traditional lenders think they can supply. Consequently, both short-term and long-term interest rates are expected to start another climb later in the year. The real squeeze is likely to come in the second half of the year.

That squeeze in the money market could become painfully acute if the business recovery builds up more steam than now seems likely and business demand for capital turns up sharply—or if the federal government runs into a big budget deficit for the fiscal year that starts in July. Then the Federal Reserve, concerned about inflation,

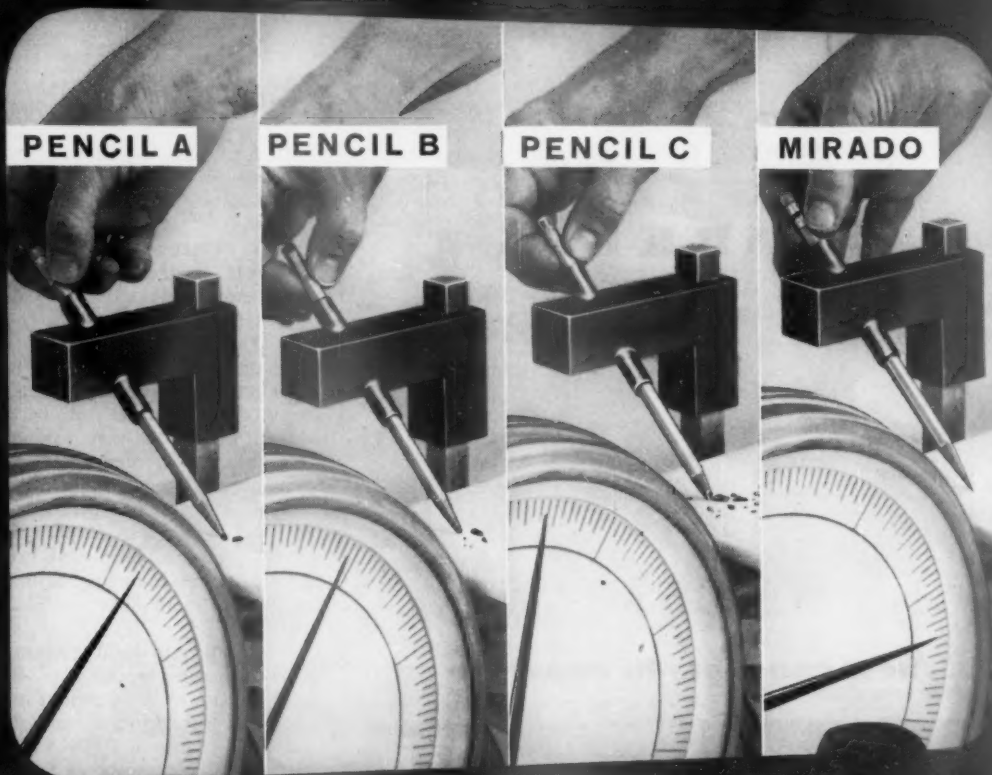
might tighten up drastically on credit.

Only an abrupt halt in the business recovery, with a resultant fall-off in demands for capital and a switch by the Federal Reserve to easy money, could change the 1959 outlook.

• **Key**—Though economists can't get together on the size of the 1959 capital gap, they agree on one thing: It all depends on the Treasury. Just how big the long-term capital shortage will be depends on how much the Treasury takes in long-term funds.

And that, in turn, is the key to how high interest rates, both short-term and long-term, will go.

For the gap created by the difference between the projected demand for capital and the projected supply must be filled by extra funds, pulled into the capital markets from other sources—from individuals, endowment funds, and similar sources. And the chief bait for enticing these funds into the bond



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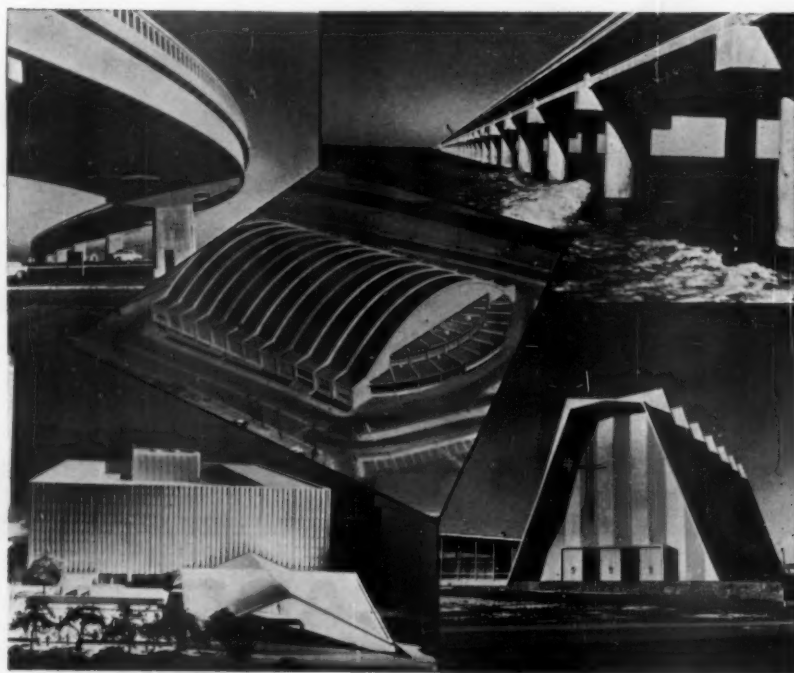


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and mortgage markets has been higher interest rates.

• **Yardsticks**—In the past, the amount of extra funds required has been a good yardstick to measure just how hard it is for businessmen and home buyers to raise funds and to explain the level of interest rates. This year, the estimated amount of extra funds needed signals a market stringency approaching the years before 1958.

Here's how the economists specializing in "capital flow" analyses figure the 1959 outlook.

Generally, they predict, the demand for long-term capital will be as large or larger than last year, excluding the Treasury's needs. Corporate financing, it's true, is likely to decline, mostly because of recent improvement in cash balances as a result of the sharp recovery in profits. One bank economist sees corporate financing falling from last year's \$8.3-billion to \$7.2-billion this year.

New state and local government financing is expected to rise. But outstanding issues will be retired in greater amounts, too; so net capital needs may be the same as 1958—\$5.9-billion.

But most economists see the demand for mortgage money soaring. "Expansion of mortgage debt is likely to be second only to the peak year of 1955," says one.

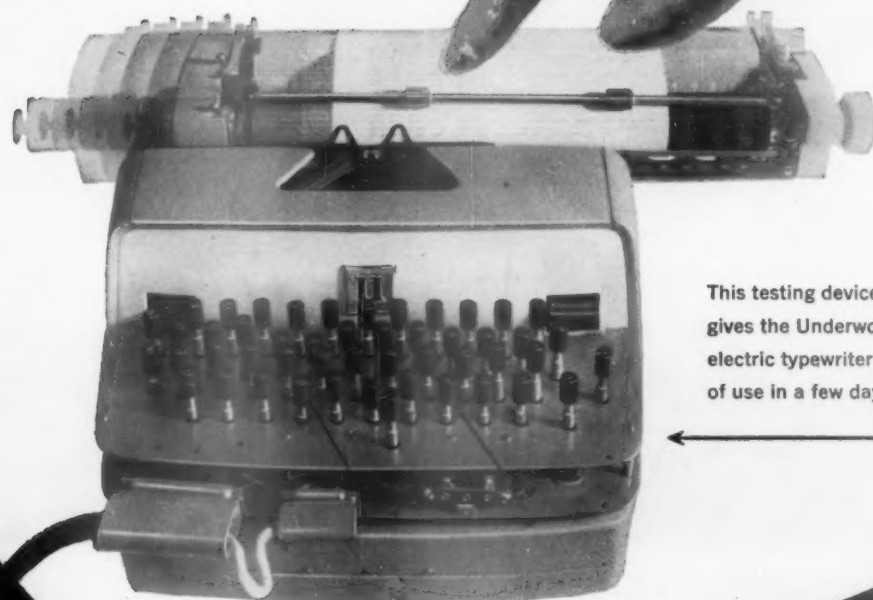
The net result will be a demand for capital at least equal to 1958's—not counting what the Treasury may seek. On the other side of the picture, the rise in the flow of funds to savings institutions that took place in recession year 1958 cannot be expected to continue in more expansive 1959.

• **Variations**—On the general picture, there's agreement, but specific predictions vary. Dr. Roy Reiersen, vice-president and economist for Bankers Trust Co., estimates the capital shortage will rise from 1958's \$3.9-billion to \$4.2-billion this year. Dr. William C. Freund, economist for Prudential Insurance Co. of America, covering both short-term and long-term supply and demand, sees the shortage jumping from \$2-billion in 1958 to \$7-billion.

Girard L. Spencer, partner in Salomon Bros. & Hutzler, puts the 1959 over-all gap at about \$6.2-billion. But he believes \$5.2-billion in extra funds will be easily forthcoming, narrowing the critical shortage to about \$1-billion.

• **Interest Rates**—The economists agree in general on the prospect of higher interest rates. Freund sees, even without a tighter Fed policy, "some further tightening in interest rates . . . , particularly during the second half of the year, marked by increasing financing needs of consumers, business, and government." He notes that "the market has already discounted some rise in business activity," so would not be surprised to see a

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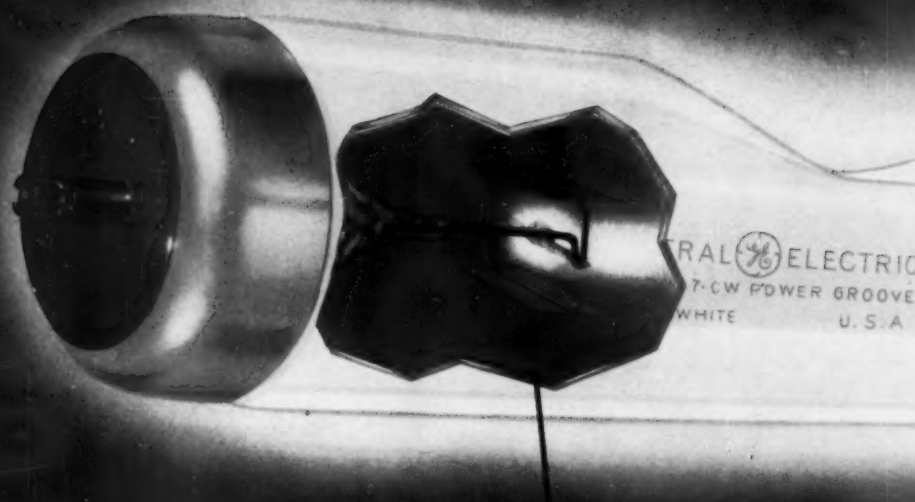
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Cathode shield improves anode action (reducing end loss) and collects tiny electrode particles that would otherwise land on glass wall, darkening end of tube. New G-E Power Groove stays brighter...end-to-end...longer!

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lowest cost of fluorescent light for most new lighting systems, and establishes a new set of standards in overall lighting economy.

LIGHT OUTPUT STAYS HIGH. General Electric's efficient cathode shield reduces cathode wattage losses... and also collects the tiny electrode particles that would otherwise be deposited on the glass wall, darkening the lamp ends. General Electric Power Grooves now stay brighter... end-to-end... longer!

When you take your next lighting step, make it a big one. The biggest! As you build or expand, put the economy of the new G-E Power Groove Lamps into your plans. For more information, call your nearby General Electric Lamp Distributor, or write: General Electric Co., Large Lamp Dept. C-909, Nela Park, Cleveland 12, Ohio.

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RATED LIGHT OUTPUT

15,000 LUMENS

Grooves or panels "squeeze" arc to increase light-producing power, give you same strength with thinner glass. They also aid light emission, enabling you to use more of total light given off by phosphor.

New configuration makes arc stream travel in a wavy path, makes greater electric power available for producing light. You get the arc equivalent of a 9-foot lamp!

THE SECRET'S IN THE SHAPE

7,600 LUMENS

13,000 LUMENS

15,000 LUMENS

REGULAR FLUORESCENT, shown here in the conventional round shape of the High Output Lamp, has a straight arc stream. As in the case of *any* fluorescent, this arc causes mercury vapor to radiate energy which excites phosphor on inside wall. This, in turn, gives off light.

ORIGINAL POWER GROOVE, developed by General Electric in 1956, has an interrupted groove along one side, continuous except for bridging at regular intervals to increase glass strength. Grooves or panels "squeeze" the arc to increase the light-producing power.

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temporary pause now in the upward push of interest rates, already at peaks reached during the height of 1957's prosperity. "They are likely to gather forward momentum—about the middle of the year—as the economy proceeds along the road to full recovery," he says.

Reierson anticipates higher interest rates at yearend, if recovery continues and if the Treasury aggressively lengthens the debt. For Spencer, what the Treasury does is the important thing for interest rates.

• **The Big Question**—What the Treasury will do—and how much bigger it will make the 1959 capital shortage—is, in fact, the biggest question on Wall Street today. Even with the budget for the next fiscal year balanced, the Treasury will need to raise between \$6-billion and \$7-billion in the second half.

But that doesn't take account of attritions on refundings—the demand of investors for cash because interest rates on new securities offered in exchange for old ones aren't high enough to attract them. If you count that in, current estimates are that the Treasury will have to raise between \$10-billion and \$11-billion.

Most of this will come from the short-term money market. But the Treasury's current goals are to lengthen the average life of the debt and to place as much financing as possible with individuals and institutional investors. The more it can keep from borrowing from commercial banks, the less inflationary the impact will be. And it will certainly try to get as much as it dares out of the long-term market.

If the Treasury plucks as much as \$1-billion from the long-term market this year—and that's the current estimate—it could give a significant boost to interest rates, since it will be competing with private borrowers.

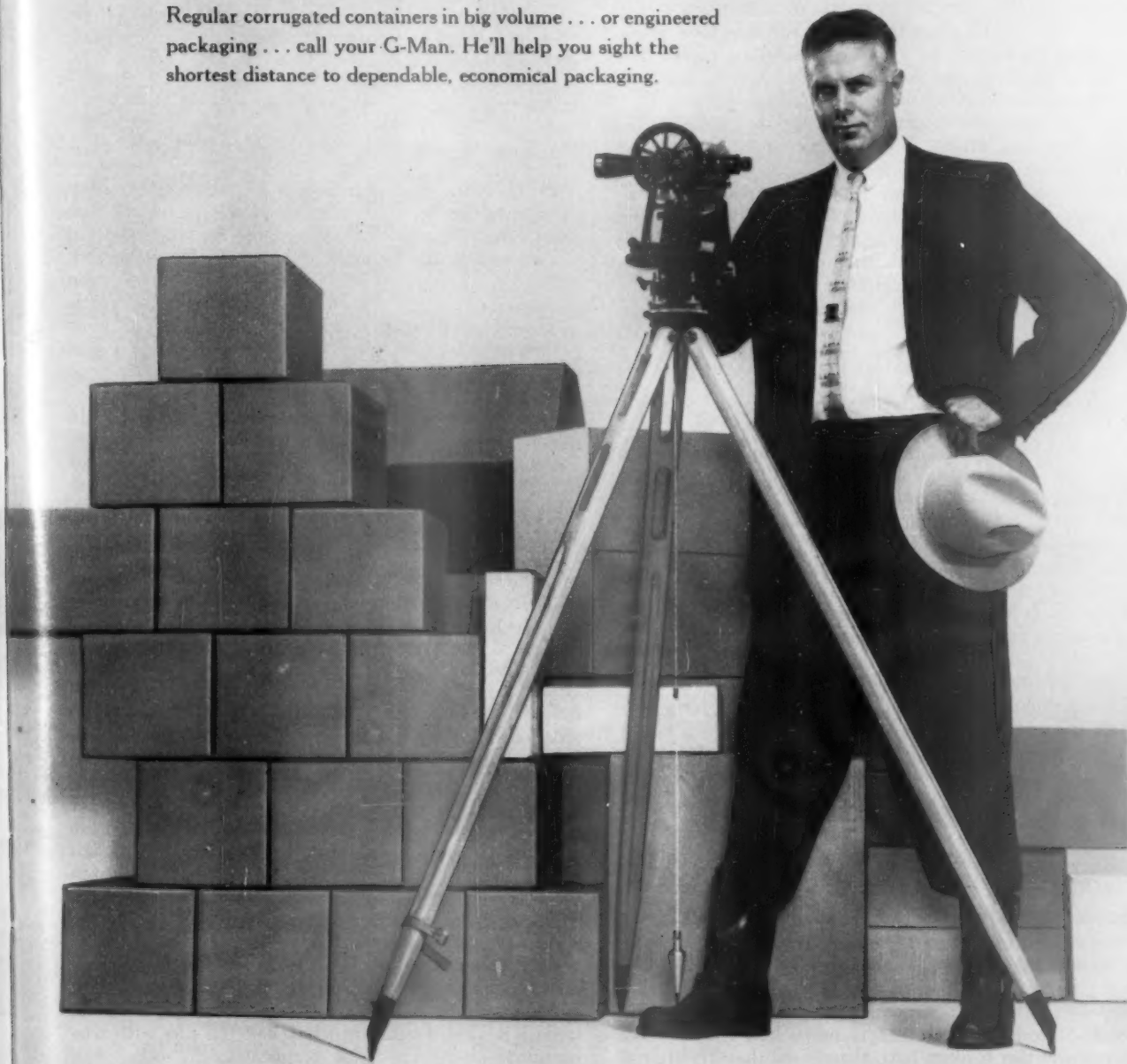
• **Short-Term**—The Treasury's operations could have an even more powerful effect on the short-term market. Since the market for long-term bonds is so thin, the Treasury will have to go heavily into short-term securities, even in refunding operations. Until now, it has had little difficulty. Corporations, flush with cash (BW—Mar. 7 '59, p. 30), have not been heavy borrowers; in fact, they have been lenders.

But later in the year, corporations will need their funds for inventory buildup and other purposes. A rising business loan demand would crimp the banks' supply of funds. Then the Treasury would have to put a high enough interest rate on its securities to attract substantial cash from other investors. Under such circumstances, it's entirely possible that the short-term interest rate will top the long-term rates. How much this would exert on long-term is already giving Wall Street considerable concern. **END**

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In Finance

• • •

Chicago Finance Company Will Expand Long-Term Industrial Loan Program

After one year of testing a program for making five-year loans available to industrial companies, Commercial Discount Corp., a small commercial finance company in Chicago, has decided to go ahead with it on a full-scale basis. CDC plans to advance the long-term loans, at above bank rates, to so-called growth companies that have good expansion records. CDC figures the new program will be more profitable than short-term loans, and that having them on the books also will make CDC's own borrowing easier. Last year, the company advanced \$2.7-million in loans to three companies.

Other commercial finance companies show little enthusiasm for CDC's long-term program. They say that, even with higher rates, it really is not more profitable than short-term loans since capital turnover is restricted. In fact, most finance companies shun long-term loans, only make them to good customers.

• • •

Railroad Loan Program Bogs Down

The slow moving government-guaranteed loan program for railroads (BW-Feb.14'59,p118) bogged down in an Alphonse-Gaston Act this week. Applications for loans totaling \$24.5-million for the New Haven and the Boston & Maine have been stalled, according to Interstate Commerce Commission officials, by the railroads' failure to get firm commitments from lenders. Both railroads say potential lenders demand ICC commitments to guarantee the loans before they will act, but the ICC won't act until the lenders do.

For the Boston & Maine, at least, the situation is getting serious. It says that it has "urgent need" by Apr. 15 for the \$6-million it has applied for; the road has appealed to the ICC to cut through the bureaucratic tangle, approve the application, and grant the needed guarantee.

• • •

Wider Branching by State Banks Seems Headed for O.K. in New York

New York's omnibus banking law, which would allow big city banks to branch into rich suburban territory (BW-Feb.21'59,p78), appeared assured of passage this week. State Republican leaders are backing the bill, and some suburban bankers have abandoned their traditional opposition. As a result, observers say the bill should go through with only token opposition. In fact, earlier proposals that would have limited branch expansion have been broadened.

In another significant move, Walter J. Mahoney, Republican State Senate leader, introduced a legislative package which could start a new trend in bank-stock-

holder relations. Mahoney's bill calls for the following:

- Limited cumulative voting for directors of state chartered banks. (Cumulative voting is mandatory for national banks.) Under the proposal 5% of a bank's stockholders could invoke cumulative voting. However, the state banking superintendent would have 30 days to mediate any dispute. Mahoney's action comes as a direct result of the proxy fight over New York Trust Co., in which a group representing 25% of the stock was denied representation (BW-Dec.20'58,p71).

- Uniform income reporting by banks, including disclosure of security earnings which some banks now conceal.

- Permission for state banks to grant stock options, now prohibited by state law, to their own pension funds or profit-sharing plans.

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Finance Briefs

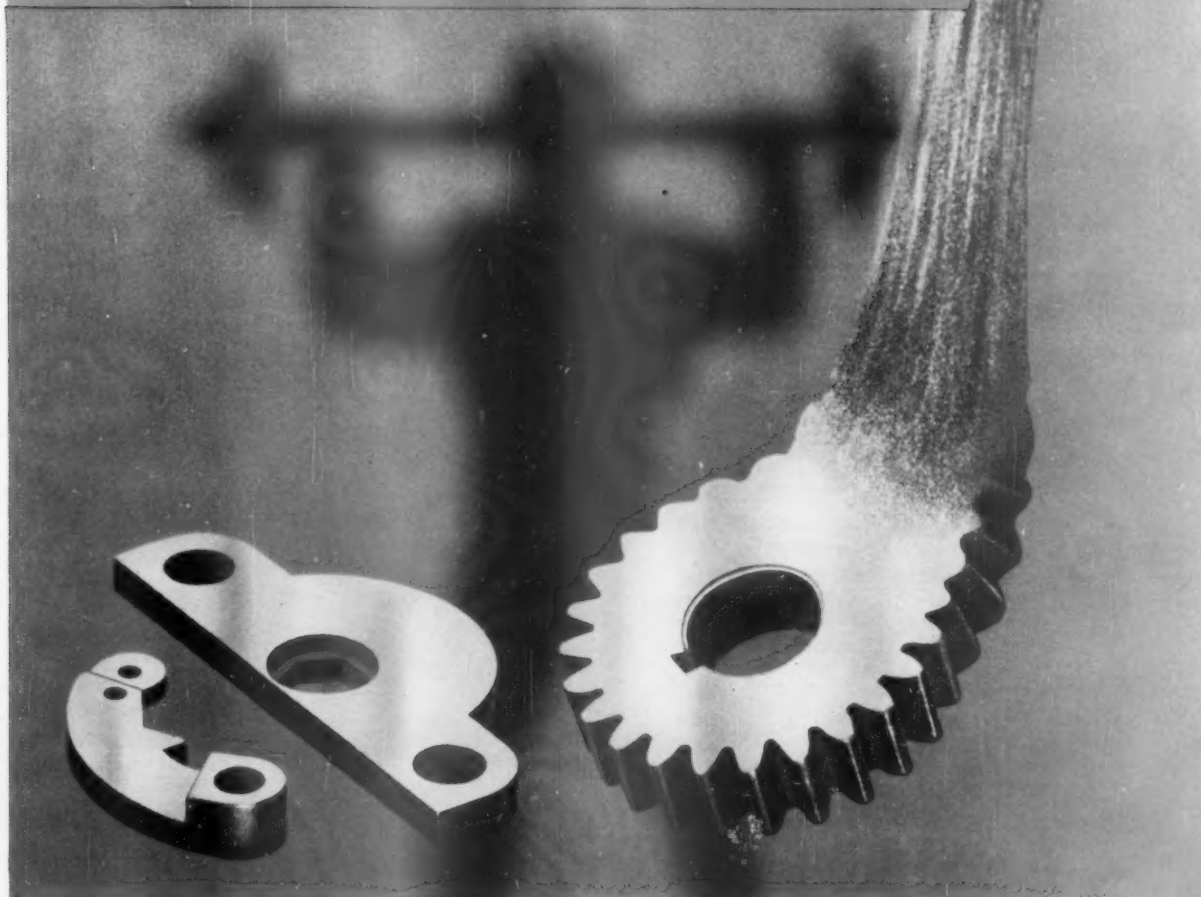
G. H. King, Jr., a Mississippi Republican, has been nominated by Pres. Eisenhower to fill the vacancy on the Federal Reserve Board caused by the resignation of Truman-appointed James K. Vardaman, Jr. (BW-Oct. 4'58,p42). King, who at 38 will be the youngest man ever to serve on the Board, is a lumberman and cattle raiser. He has served as a director of the New Orleans branch of the Atlanta Fed since 1956, and was chairman of the branch in 1958.

The du Pont antitrust hearings will resume Mar. 16 in Chicago with defense witnesses countering the government's view that divestiture of General Motors stock held by du Pont could be accomplished without seriously affecting its market value. Under the government plan, about 43-million GM shares would be distributed to du Pont shareholders, another 20-million sold publicly. Du Pont, on the other hand, wants to retain stock ownership—and dividend income—but turn voting rights over to its stockholders.

As expected, the Federal Reserve Board has turned down Chase Manhattan Bank's request for an increase—from 3% to 3½%—in the maximum rate on time deposits (BW-Mar.7'59,p63). Fed officials say no action is warranted at the moment—although it's rumored the New York Fed backed a change. Chase's request was made because foreign funds are switching to other money markets in search of higher yields. New York banks are expected to press further for the increase because last week's hike in the discount rate and the general jump in short-term rates which followed may draw funds from banks to open market investments.

ACF Industries, Inc., has a new plan for leasing railroad freight cars to its customers. Its first deal: a 4,000-car order—worth \$40-million at retail—from the Pennsylvania RR. The Pennsy will buy half the cars with conventional equipment trust certificates; the other half will be leased from an ACF subsidiary at a rental fee "substantially under" the \$2.75 a day rate now charged for freight cars interchanged between railroads. The plan gives ACF a powerful new sales aid; Pennsy, in turn, which regularly pays out much more than it receives in interchange fees, gets a chance to cut costs by relying more on its own cars.

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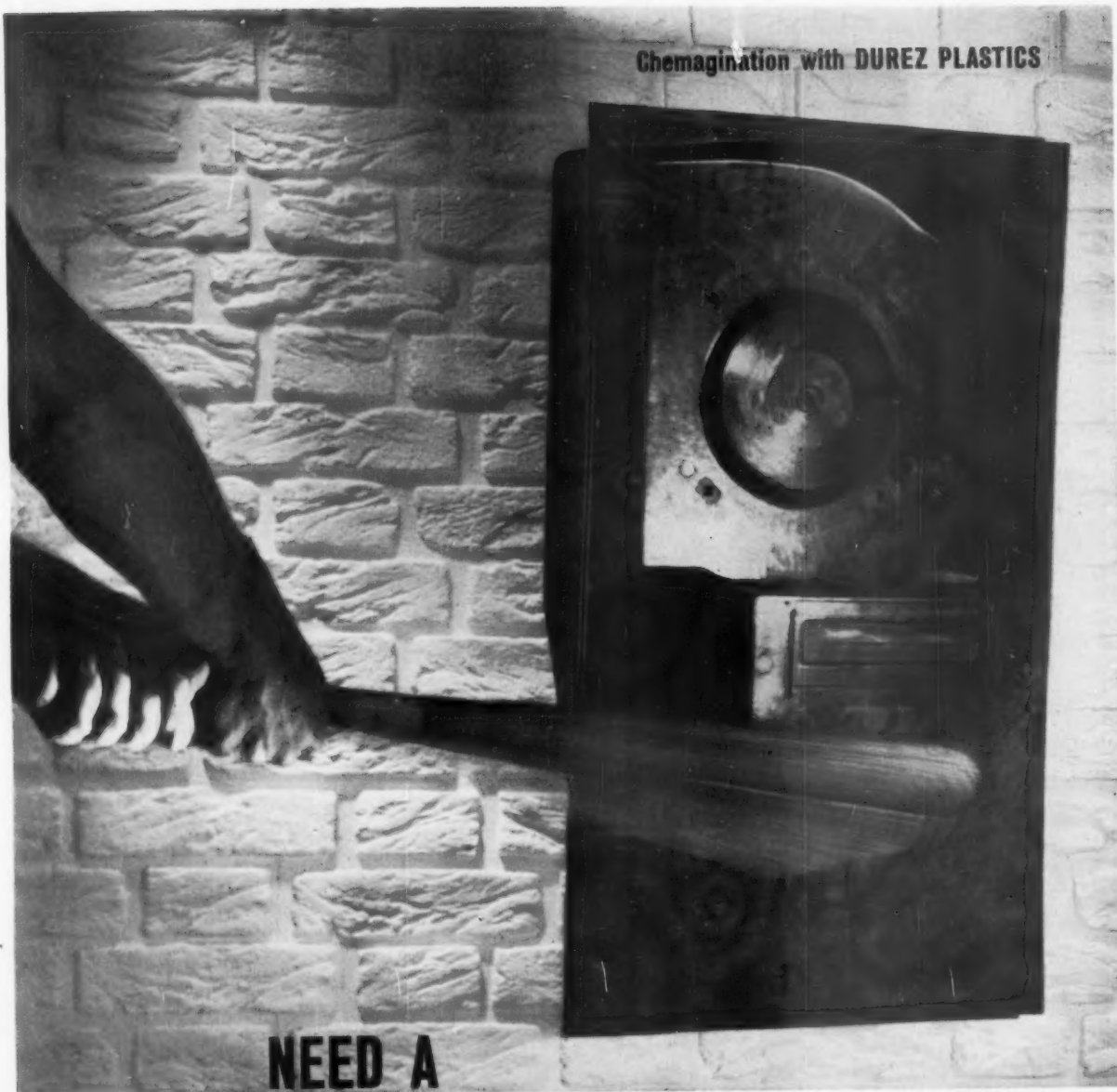
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Too Much Coal Plagues Europe

Six-nation community faces worst emergency since 1952, but seeks milder solution than declaration of an all-out crisis.

Western Europe's six-nation Coal & Steel Community is straining under the worst crisis since its formation in 1952.

The main problem is how to cope with an enormous coal glut. Some 30-million tons are stockpiled at pitheads, another 25-million tons in users' hands. Adding to CSC's woes are the recent dip in coal consumption, the rise in coal-industry unemployment, and the continuing flow of U.S. coal imports.

Hardest hit of the CSC countries is Belgium. Two weeks ago, police battled strikers (picture) protesting the planned closing of "uneconomic" mines.

Now Brussels wants CSC's Council of Ministers to declare a "state of manifest crisis." That would give the High Authority, CSC's nine-man executive group in Luxembourg, the power to set both production and import quotas.

• **Larger Stakes**—There's considerably more at stake in the present crisis than economic troubles. CSC was Western Europe's first serious attempt to set up a "supra-national" community for a major sector of its industry. The aim was not only to lower trade barriers on iron, steel, and coal products, but also to develop gradually an organization at the top more authoritative than the single voices of any one of its members.

Beyond that, it served as the steppingstone for broader economic and political cooperation among the six nations—Italy, France, West Germany, and Benelux. Partly because of CSC's evident success in one industrial sector, these countries went on to form Euratom, the agency for developing peaceful uses for nuclear energy, and the big Common Market, which began lowering tariff barriers on Jan. 1.

Observers in key European capitals now are watching to see how CSC, the forerunner of these later organizations, meets the coal crisis. If CSC fails to find strong solutions to the crisis—say many European observers—it will be setting an unhappy precedent for both Euratom and the Common Market.

I. Limited Proposals

This week Paul Finet, former Belgian labor leader and president of the High Authority, offered some solutions short of declaring a "manifest crisis." As submitted to CSC's con-



BELGIAN MINERS battled police in towns near French border when government moved to shut down "uneconomic" mines in face of huge coal stockpiles.

sultative committee next week and CSC's Council of Ministers the following week, Finet's four-point plan will include:

- "Fair quotas" that would adjust output levels to varying conditions within the community. Thus France, which has kept coal supplies nicely balanced with demand, would maintain output at least at present levels. Production in the Ruhr, where coal stocks are high, would rise a bit to help relieve unemployment.

- Freezing stocks at present levels. This idea, not entirely clear, could mean that CSC members would freely sell current coal output—but leave existing stocks unsold for the time being.

- "Regularization" of imports to avoid troubles with U.S. exporters because of sudden cutbacks in coal imports. The High Authority might negotiate with U.S. exporters to spread shipments of coal under contract over a much longer period of time. Or it might even pay part of the indemnities for outright cancellation of long-term coal contracts.

- Financial aid to miners in the worst hit coal basins. That might mean CSC guarantees to miners covering 90% of their wages.

This rough plan emerged last week after close consultation between the High Authority and member governments. France's Prime Minister Debre said the French coal industry had modernized its mines, saw no reason for full-fledged quotas on production or imports. The West Germans, who have already slapped restrictions on coal im-

ports, said they needed no help. Both the Dutch and Italians said they would refuse to buy more expensive surplus coal from CSC in place of cheaper U.S. coal now being imported.

Thus, the majority is against declaring a full crisis and slapping on compulsory quotas. Without the vote of either of the two main producers, France and Germany, CSC must try to work out other solutions such as the Finet plan.

- **The U.S. Interest**—The U.S. coal industry, though not consulted during present negotiations, has a lot at stake in the outcome. During the Suez oil crisis, U.S. exporters signed long-term contracts with fuel-hungry Western Europe. They counted on selling some 30-million tons of coal annually in the immediate years ahead.

It hasn't happened that way. European coal imports from the U.S. dropped from 37.8-million tons in 1957, a peak year, to 26-million in 1958. Even before the present plan for "fair quotas," the High Authority was expecting a further drop to 17-million this year.

As some European economists see it, CSC is likely to have more, rather than less, trouble over coal in the next few years. Though vital to the steel industry and the production of some plastics, coal is losing ground to competing energy sources—to oil now and to nuclear power in the future. The only long-range solution, say some observers, is a coordinated European energy policy.

- **Too Little Muscle?**—Critics also say that CSC's High Authority lacks just that—real authority. Lacking that, CSC



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is a far cry from the idea intended by France's Robert Schuman and Jean Monnet when they blueprinted the community in 1950. CSC, the critics say, has depended too much on the work of civil servants of mediocre caliber, since Monnet stepped down as CSC's first president.

II. Hopeful View

One observer with a much brighter view is William Diebold, Jr., director of economic studies at the Council on Foreign Relations. In *The Schuman Plan*, a book to be published here in May, Diebold examines in detail the ups and downs of CSC's history.

The old idea, as he points out, was to cut across national boundaries, cut through tariff barriers and discriminatory transportation rates, and link Lorraine iron with Ruhr coal. In 1950, most French industrialists feared future competition from a revived German steel industry. But France's policy of keeping German industry down—as Diebold says—was "bankrupt."

As it turned out, CSC has brought French and German industry closer together, but has not caused many "economic dislocations," Diebold says. It has forced France—for example—to charge the same prices on steel to other CSC customers as it does to domestic customers. But, while decreasing intra-community trade, CSC has not hurt individual steel producers—as some had anticipated. Beyond that, the CSC has helped subsidize weak members—a German and Dutch subsidy of \$50-million, for instance, to Belgian collieries (which Belgium has failed to use effectively, say some observers).

• **Give-and-Take**—Diebold notes that CSC's success so far has stemmed largely from its give-and-take "diplomatic" consultations with member governments. In some cases, it has acted forthrightly. For instance, it overrode Economics Minister Erhard's violent objections in 1957 and backed German coal producers' demands for a price increase.

Diebold is not so pessimistic as many observers over the present crisis. He says that the "coal industry is caught between a long upward trend and a temporary cyclical downturn." He traces the crisis not so much to any basic faults in production planning, but more to CSC's two long-standing problems—inadequate financing of coal stockpiles and failure to shut down uneconomic mines. He says the crisis has brought these twin problems into the open.

Looking 10 years ahead, though, he suggests that the coal industry will have to cope with new "shifts in economic forces" and may, in fact, have to accept treatment as a "type of utility." **END**

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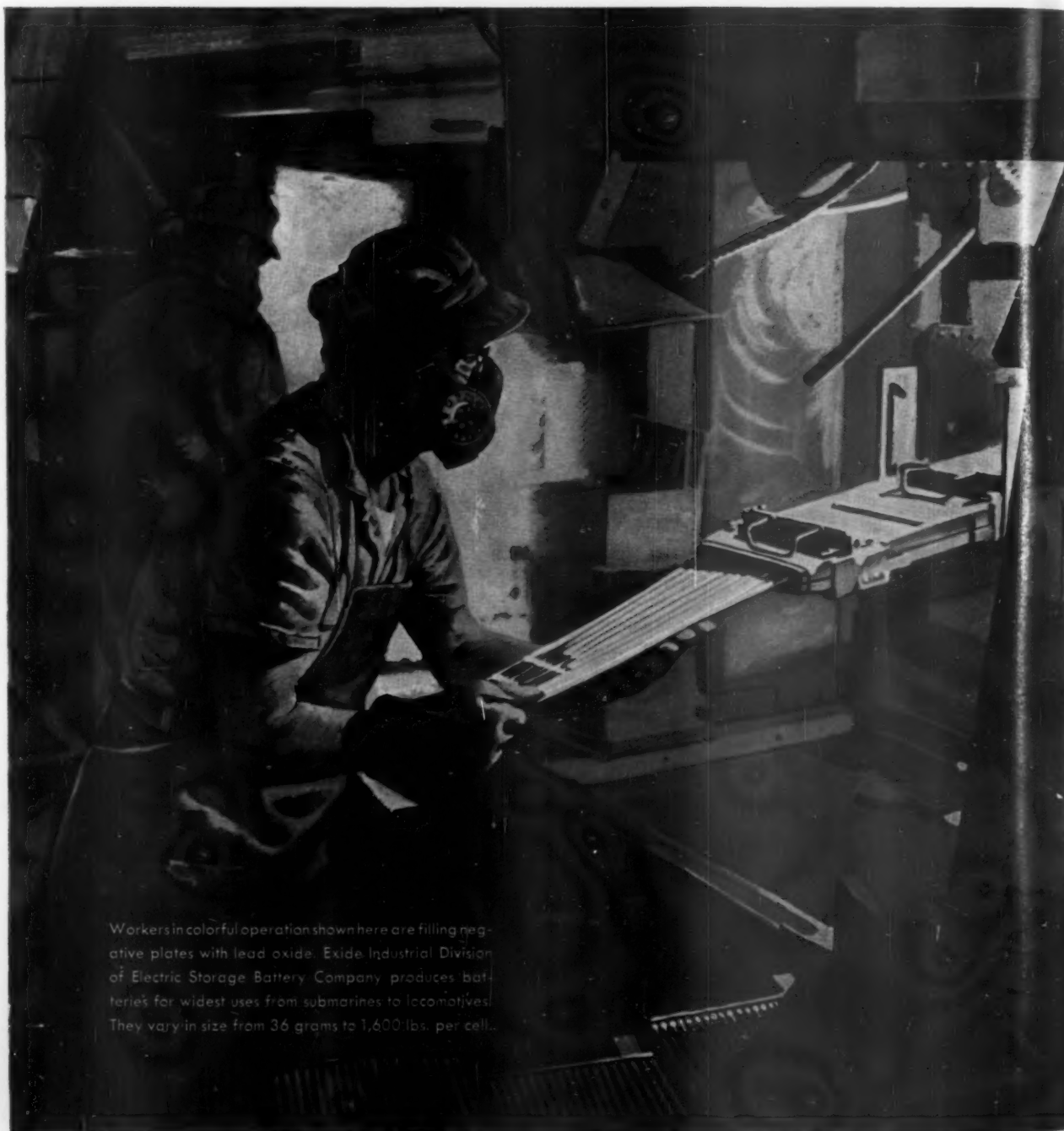
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Here's how Exide Industrial Division of The Electric Storage Battery Company turned up new ways to cut maintenance costs, with the help of Mobil

"How can we make it better, or more efficiently?" That's The Electric Storage Battery Company's challenging attitude. For five years now Socony Mobil has helped meet this challenge in the company's Philadelphia plant. During this period Mobil's lubrication program has saved \$48,380 in maintenance costs.

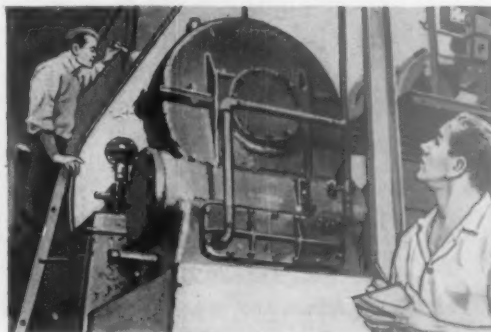
Mobil's Correct Lubrication program helped put the plant's lubrication on a sound engineering basis. Every machine's needs were charted . . . rigid maintenance schedules established. Even the oilmen's routes were revised to improve effi-

ciency. As a result, 1,256 maintenance man-hours a year are now available for other purposes. Other sizable savings are listed below.

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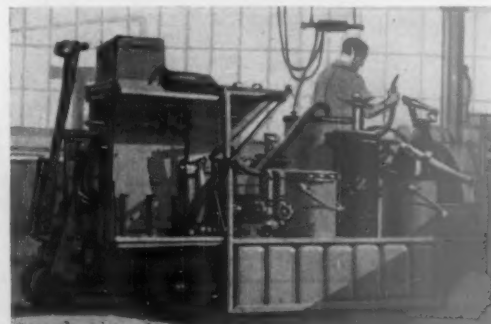
Repair of roller drive chains interrupted schedules of Grid Casting Units at five-month intervals. Mobil recommended installation of 4 gravity feed oilers with lubrication brushes that cut downtime, maintenance time, too. Saving—\$8,003.



Inspection revealed abnormal wear of bull gear on grinding-mill and need for major overhaul and replacement. Mobil recommended grinding teeth, re-setting gear and use of heavy, high-film strength gear oil. Gear replacement avoided—\$10,000 saved.



Plate Filling Machines were being greased by hand at thirty-minute intervals. Mobil recommended automatic grease system with water-resistant Mobil product. This saved 25 man-hours per week . . . cut bearing wear rate 25% . . . has already saved \$15,300.



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Beer Adds Kick to Latin Economy

Central and South American brewers are pushing their sales everywhere—from big coastal cities to Andean villages.

Mention beer to a Mexican, and chances are he will reel off the joke about Mexican brands of beer: "The Duke of Windsor gave up his Corona for a Bohemia, even though he didn't have Carta Blanca from Victoria, and pulled a real Dos Equis (double cross)."

Mexicans aren't the only beer enthusiasts in Latin America. From the tropics of Guatemala to Peru's cool altiplano, local breweries—many founded decades ago by German immigrants—do big business. Honduras' Salva Vida, Cuba's Cristal, Panama's Balboa, Venezuela's Zulia, and Brazil's Antartica are just a sample of the 100 or so brands that together constitute one of Latin America's fastest-growing industries.

• **Blue Chip Beverage**—One of the biggest and oldest (celebrating its 70th anniversary next month) is Colombia's Consorcio de Cervecerias Bavaria (pictures). It is Colombia's largest privately owned company, has sales of around \$63-million annually.

The government's oil company,

Ecopetrol, and steel company, Acerias Paz del Rio, are bigger. But as a private company, with a blue-chip stock held by 50,000 Colombians, Bavaria ranks ahead of even Coltejer, the giant textile company, and Cia. Colombiana de Tobacco, S. A.

Compared with an American brewery such as Anheuser-Busch, Inc. (Budweiser brand) that boasts over \$250-million in annual sales, Bavaria may look small. But it has a market of only 13-million people to tap. And only 1.8-million live in the largest cities—such as the capital, Bogota, and Bucaramanga—where sales come easily.

Still, in the past 10 years, Bavaria has almost tripled sales volume. With 120,000 outlets, it claims 60% of the Colombian beer market. Four fairly weak competitors—Andina, Aguila, Alemana, and Union—divide the rest of the market.

• **Ladies' Potion**—Bavaria has converted wine-drinking ladies of Bogota society to beer drinking, and made "beer party" a part of Colombians' vocabulary. More important, the company has made Colombians as conscious of good beer as they are of their own high-grade coffee, on which the country depends for 80% of export earnings.

Almost as though it were poking fun at coffee growers' recent troubles with low prices and poor sales, Bavaria



BAVARIA beer plays big role in Colombia's four-century-old drive to combat the wide consumption of intoxicating home-brewed "chicha" that's made from corn.

MULE TRAIN delivers cases of beer to isolated villages of Andes. Company salesmen make about 100 such trips a year.





Why every family should have a family doctor...

EVERY family should select and become acquainted with a doctor before illness strikes. Yet, many families wait until sickness or emergency requires a hasty decision about the doctor they will call.

A family doctor, usually a general practitioner or an internist, can care for about 85 percent of your family's illnesses. And should you need specialized care, the family doctor can arrange it.

Perhaps the best way to select your doctor is through your local medical society or community hospital. They will give you the names of several physicians—and you may choose one of them with assurance that you will be in good hands.

Then, call the doctor and see him for a friendly talk—about fees, night calls, the hospitals he's associated with, and what-

ever else is on your mind.

Then ask yourself these questions: did you like him... feel at ease with him... would you trust him during critical situations which illness often creates? These questions are important. For mutual friendship and understanding are essential to a warm doctor-patient relationship.

What are the advantages of having a regular doctor? For one thing, he will get to know you and your family intimately—your "medical history," your response to drugs, your normal blood pressure, your emotional reaction to illness, and many other facts which may be helpful when illness occurs.

He can also give you the benefits of preventive medicine. For example, if you have young children, he will want to see them at

intervals to check their growth—and to keep their protection against communicable diseases up to date.

For others in your family, he can be a health counselor. For instance, if you're bothered at times by seemingly trivial complaints—indigestion, headache, nervousness, or fatigue—you might hesitate to go to a doctor whom you do not know. But with a family doctor, you'd feel free to talk over any mental or physical condition that upsets you now and then.

Select and become acquainted with a doctor now. Keep his name, address, telephone number and office hours posted in a spot known to everyone in your family. His continuing supervision can help your children grow up strong and well—and help you live a long and healthy life.

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I was making \$40,000 a year

Friends, not three years ago I was happy and prosperous—the manager of a thriving cat food plant. I made \$40,000 a year. I had three cars, a thirty-foot cabin cruiser, a twenty-room home in an exclusive suburb. *Today, all that is gone.*

My story is brief. Temptation ruined me. We were installing cold storage vaults for the raw materials out of which we made our cat food. And I tried to cut a few corners on the cost. Instead of heeding my consulting engineers—who counseled using Okonite Cable to supply power to the refrigeration equipment—I picked up some “bargain” cable from my brother-

in-law because he gave me a break on the price.

Nemesis struck on a Friday night—the hottest night of the year. The refrigeration was going full blast and the power load was too much for my bargain cable. It blew. Monday morning, some poor soul opened the cold storage vault...

Why dwell on what happened? Why re-live the screaming... the frantic mass charge of plant personnel for the doors and windows... the little acts of heroism that averted disaster... the eighty thousand cats that took over the plant and couldn't be dislodged for a month... the summons from

the Board of Health... the fine... the lawsuits... the loss of business... why?

Fired; broken in spirit, I hunted for another job. But there was something about me that people didn't like. I went downhill. I lost my home, my boat, my membership in the Vasemere Country Club. Everything.

Friends, profit by my sad example. If *you* have vital circuits to install... make sure they give you Okonite Cable.

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where there's electrical power... there's **OKONITE CABLE**

(Story starts on page 66)

later this year will begin exporting beer to the U.S.—as one executive puts it, “to help the country’s dollar needs.”

I. Bavaria's Empire Building

Bavaria has had its growing pains—including government restrictions on importing up-to-date machinery and tin plate for beer cans. (The company still relies on the more expensive glass bottles.) But the main problem is how to deliver beer to backland customers.

Colombia is so vast that both Texas and California would comfortably fit inside it. Its roller-coaster topography ranges from the high Andes to the lowland Amazon jungles.

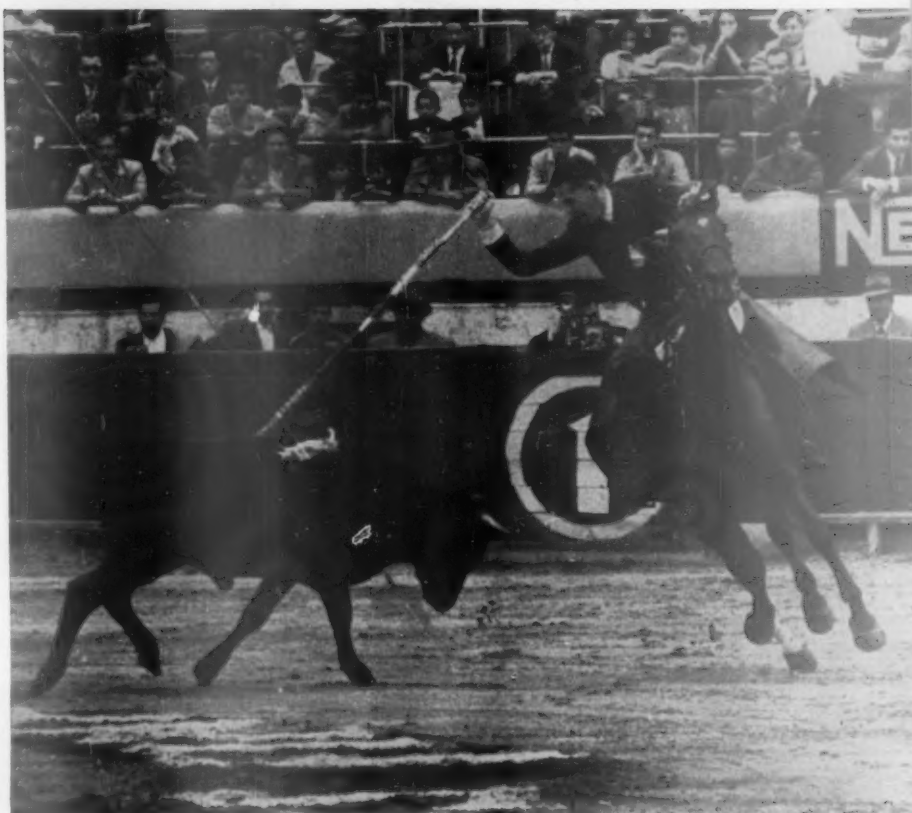
Bavaria uses planes to fly about 180,000 bottles monthly to the Amazon area. Boats, in turn, ply up the Amazon tributaries carrying Bavaria beer to steaming bamboo villages. Similarly, mule trains accompanied by a company salesman make more than 100 regular runs yearly up Andean slopes to isolated mountain villages.

Beyond that, back-country guerillas interrupted, and sometimes stopped, beer distribution in the 1950-57 period when the Liberals and Conservatives, Colombia's two main political parties, were fighting. Bavaria, while trying to cold-shoulder dictator Rojas Pinilla, at times had to play along with the government. (However, it did join bankers and businessmen in the general “strike” in May, 1957, that toppled Rojas.)

• **Promotion-Minded**—To boost sales, Bavaria pours around \$1-million annually into publicity. It sponsors three traveling circuses, each giving an average of 10 free shows weekly. It builds courts for playing “tejo”—an ancient Indian game similar to horseshoes—and country pavilions for dancing. It supplies shirts, emblazoned with the company brand names, to bicycle racing teams. Trucks and boats showing free movies—full-length features, plus documentaries on health and education—travel the hinterland. And an international beauty queen is on the payroll as “public relations coordinator.”

In fact, Bavaria uses every trick possible to keep sales expanding about 10% a year (though the country's population is growing by only 2% annually). It gives the 1,000 salesmen on its 5,000-worker payroll a hefty dose of motivational research. It pays wages and salaries 50% to 100% higher than the national average. After four years' work, employees can get interest-free loans from the company to build or buy homes.

• **Race for the Lead**—Founded in 1889 by German-immigrant Leo Kopp, Bavaria jumped into leadership of the



PROMOTION-CONSCIOUS advertising manager, Fernando Lopez, battles a young bull at a company-sponsored benefit for the Cundinamarca Bicycle League in Bogota.



COSTENA CIRCUS—named after a Bavaria brand—gives an average of 10 free shows a week. Company trucks and boats also take free movies into the hinterlands.



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BAVARIA'S Pres. Vicente de la Cuesta pays his stockholders a fat 10% dividend.

brewery industry in 1930—and Kopp at that time was still running the company. A price war had cut beer prices to a below-cost 3¢ a bottle. Kopp beat competitors by buying them out, and forming the present Consorcio.

Later, after Kopp's death in 1936, Bavaria raced even farther into the lead by helping the government combat widespread use of home-brewed "chicha"—an intoxicating (15% alcohol) drink that had been intermittently outlawed by the Catholic Church and the government for four centuries. With government backing, the company began selling 4%-alcohol Cabrito beer at the giveaway price of less than 1¢ a bottle. Now, hardly any Colombians drink chicha and, instead, buy beer—largely any of Bavaria's 14 brands.

Colombian investors, besides, readily buy Bavaria's stock on the Bogota Bolsa. Though paying slightly lower than other domestic companies, Bavaria has averaged a fat 10% dividend since 1932. Colombians frequently give shares of the company as a communion or birthday present.

II. Beer vs. Wine

Not all breweries in Latin America can come close to Bavaria's business. Chile's Compania Cervecerias Unidas, almost a monopoly, racks up good sales in the summertime. But it has to fight the country's large wine industry and Chileans' well-developed taste for wines.

• **Argentina's Plight**—The worst situation of all is in Argentina. For one thing, the "portenos"—citizens of Buenos Aires—and the gauchos on the pampas drink about four glasses of wine for every one of beer. But that's simply

habit. The real rub is the government's wine subsidy and low 2% tax on wine sales. Beer gets no subsidy—and gets hit with a 20% tax.

There have been other troubles, too. Since the end of World War II, beer sales have doubled. But soft-drink sales have grown even faster. On top of that, dictator Peron badly hurt the brewery industry by letting transportation and labor relations go to pot. Bieckert, the leading brand, has repeatedly faced labor strikes.

Still, Argentina's breweries are showing new signs of life. That's because of the recent unraveling of the tangled affairs of FOCA—a state-controlled company that managed the big Bemberg breweries. In 1948, Peron expropriated the industrial empire of the Bemberg family (originally Alsatians). Just before his downfall in 1955, Peron transferred the Bemberg breweries to FOCA. Early this year, Pres. Frondizi handed back these \$100-million properties to the 24,000 French stockholders of the Bemberg enterprises.

• **Income Producer**—By contrast, Brazil's twin giants—Antartica and Brahma—are in fine shape. Both produce all sorts of drinks—tonic water, soda, and guarana, Brazil's fastest-selling soft drink—but get their largest chunk of income from beer. While battling with smaller breweries in the interior, they pretty well dominate the key markets of Rio de Janeiro and Sao Paulo. And Brahma, for one, is a choice stock for Paulista investors.

• **Second-Largest**—In Venezuela, where breweries rank among the largest Venezuelan-owned companies, beer sales last year jumped 24%. Nacional is the big name, with \$25-million yearly in gross sales (half the beer market) and a president who formerly headed the Central Bank. Since the overthrow of dictator Perez Jimenez, breweries have played up beer as the "people's beverage." Second-ranking Polar uses a native poet, accompanied by harp, to make pitches on local radio stations.

• **Better Than Pulque**—The leader in Mexico is Monterrey's Cerveceria Cuauhtemoc. Out of its breweries flow 8-million bottles daily of what experts consider one of the world's finest Pilsener beers—alcoholic content higher than similar U.S. beers, price much lower (7¢ a bottle). Founded by Don Isaac Garza and Don Francisco Sada, whose families now are among Mexico's wealthiest, Cuauhtemoc has helped change the old Mexican habit of drinking thick, sour pulque or overly alcoholic aguardiente.

Like the Colombian government in its campaign against chicha, the Mexican government is backing the country's 20-odd breweries in their program to sell the idea beer is a sanitary, moderate—and highly enjoyable—drink. **END**

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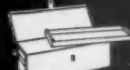
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SHOP BOXES



TOOL BOXES



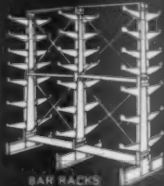
LOCKERS



HOPPER BINS



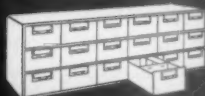
FOLDING
CHAIRS



BAR RACKS



TOOL STANDS
AND TOTERS



DRAWER CASES



SERVICE CARTS



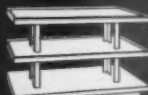
WORK BENCHES



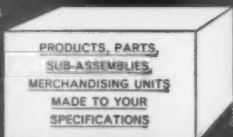
MODULAR
WORK BENCHES



CABINET
BENCHES



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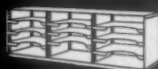
STOOLS



REVOLVING BINS



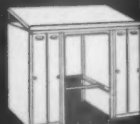
FLAT DRAWER FILES



SORTING FILES



STORAGE CABINETS



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Sight-Seeing Rail Cars to Offer Rolling Views of Picturesque France

In an effort to attract more tourists to rail travel this summer, the French National Railways is introducing 10 new "panoramic" rail cars (picture) to run over some of the most picturesque routes in France.

The self-propelled cars—called "autorails"—carry 88 passengers at a top speed of about 85 mph. First-class passengers ride on the upper deck in 44 reversible airplane-type seats. Travelers on a budget ride on fixed-seats in wide-windowed, second-class compartments at either end. The power plant is a diesel-electric unit of 800 hp.

Built by Renault, a prototype model cost about \$170,000. Later models are to be substantially cheaper. If the experiment proves popular, railway officials say more orders will be placed.

...

Euratom Plans 24 Nuclear Power Plants; 4-Million-Kw. Capacity to Cost \$1.43-Billion

In the next five or six years, the six-nation Western European Atomic Energy Community (Euratom) plans to erect 24 nuclear power plants with a combined capacity of 4-million kw. The program was announced by Dr. Heinz L. Krekeler, Euratom commissioner.

Estimating total cost of the program at \$1.43-billion or about \$360 per kw. of installed capacity, Krekeler said power reactors to be built in West Germany as its share of the plan would total 750,000 kw. compared with 21-million kw. of thermal and hydropower capacity in the Federal Republic. The other members of the community are France, Italy, Belgium, Holland, and Luxembourg.

...

Texas Outfit Gets Argentine O.K. For \$40-Million Butadiene Plant

Texas Butadiene & Chemical Corp. of Houston—partially owned by Godfrey L. Cabot, Inc.—got the green light from the Argentine government to build a \$40-million butadiene and carbon black plant.

The new plant will be located in Patagonia, near Comodoro Rivadavia, one of Argentina's major oil-producing regions. About 1,000 miles south of Buenos Aires, the fields are accessible from a deep water port.

The installation will be built and operated by Texas Butadiene & Chemical International Ltd., a wholly owned subsidiary. It will produce an annual 30,000 tons of butadiene for use in the manufacture of 40,000 tons a year of synthetic rubber.

...

Russia Dabbles in Installment Credit— But You Need a Letter From Your Boss

One of capitalism's prize inventions appears to have invaded the Soviet Union. Installment buying is being introduced in the U.S.S.R. on an experimental basis. Izvestia, the official organ of the Soviet state, says the system has gone on trial in two Ukrainian cities—Stalino, capital of the coal-rich lower Don, and Nikolaev, a Black Sea port famous for its shipyards.

In certain selected shops, a Soviet citizen may now put down one-fifth of the purchase price of an article and pay off the rest over a six-month period. Items up for installment buying are said to include watches, radios, cameras, some electrical appliances, bicycles, scooters, hunting rifles, musical instruments, and motorcycles.

To qualify for a purchase on the pay-later basis, a customer must produce a letter from his trade union or office, and exhibit his identity papers.

...

U.S. Supplier Sets Up in Britain To Qualify for Canadian Business

In a strategic move to take advantage of Canada's preferential treatment of British goods, another American company is switching its source of supply from the U.S. to Britain. Cummins Engine Co. of Columbus, Ind., will supply its Canadian customers with truck and marine diesels built in Cummins' \$5.5-million British plant—established at Shotts, Lancashire, in 1957.

Canadian businessmen interpret the move this way: If a company can certify that 40% of its engine parts are British-built, then the remaining 60%—or the total value of engine parts—benefit from the Dominion's favored-nation tariff treatment of British motor cars, engines, and parts.

...

Monsanto Moves Into Turkey

Monsanto Chemical Co. is participating in a venture with Sicedison S. p. A. and Oronzo de Noro—Italian chemical giants—to put up a plant near Istanbul. Production will include chlorovinyl resins and electrolytic chlorine. Sicedison will receive stock in payment for engineering assistance. Monsanto will provide technical knowhow. The U.S. Development Loan Fund granted Turkey a \$6.1-million loan toward construction of the plant.

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Pittsburgh Corning Products
make the things you build
cost less, last longer, look better

example:



NEW 1¾" FOAMGLAS® Roof Insulation: unique benefits for more roofs at lower cost.

If you've ever compared the quality of roof insulations, you'll recognize FOAMGLAS, the cellular glass insulation, in this picture. And you'll know that it's the one material that combines all these benefits: moisture-proof for constant insulating value . . . a natural vapor barrier . . . incombustible . . . and strong enough for every roof and traffic load.

What you may not recognize is the new 1¾" thickness of the FOAMGLAS roof insulation pictured. Now Pittsburgh Corning makes it possible to put the quality of FOAMGLAS on roofs needing less than 2" insulation. And new 1¾" FOAMGLAS Roof Insulation costs less. 25% less. Now FOAMGLAS, which requires no vapor barrier, is competitive with other roof insulations on an installed basis.



example:

PC GLASS BLOCKS: artful blend of color, form and function matched to the curtain wall concept. A glance at these varied designs will show you how Pittsburgh Corning has transformed glass blocks into a versatile new medium of curtain wall design.

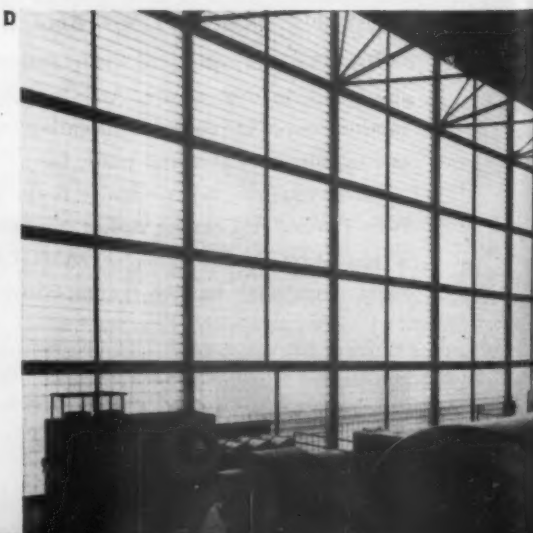
Consider color. PC developed 12 brilliant ceramic face hues to create sparkling color accents for glass block curtain walls.

And form. There's a new size and shape to PC Glass Blocks . . . the 4 x 12. Blended with standard square blocks, the 4 x 12—plain or colored—presents broad possibilities for form and pattern variation on the face of a curtain wall.

Texture, too. PC Glass Blocks provide a full range of surface patterns and textures to enhance design.

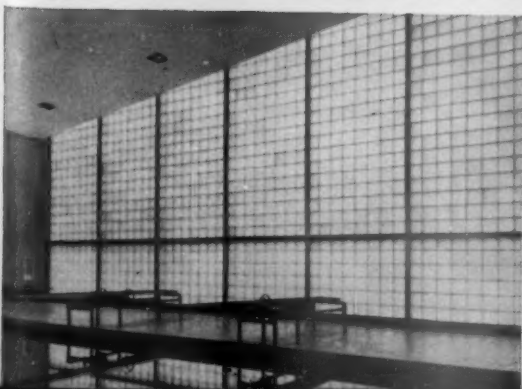
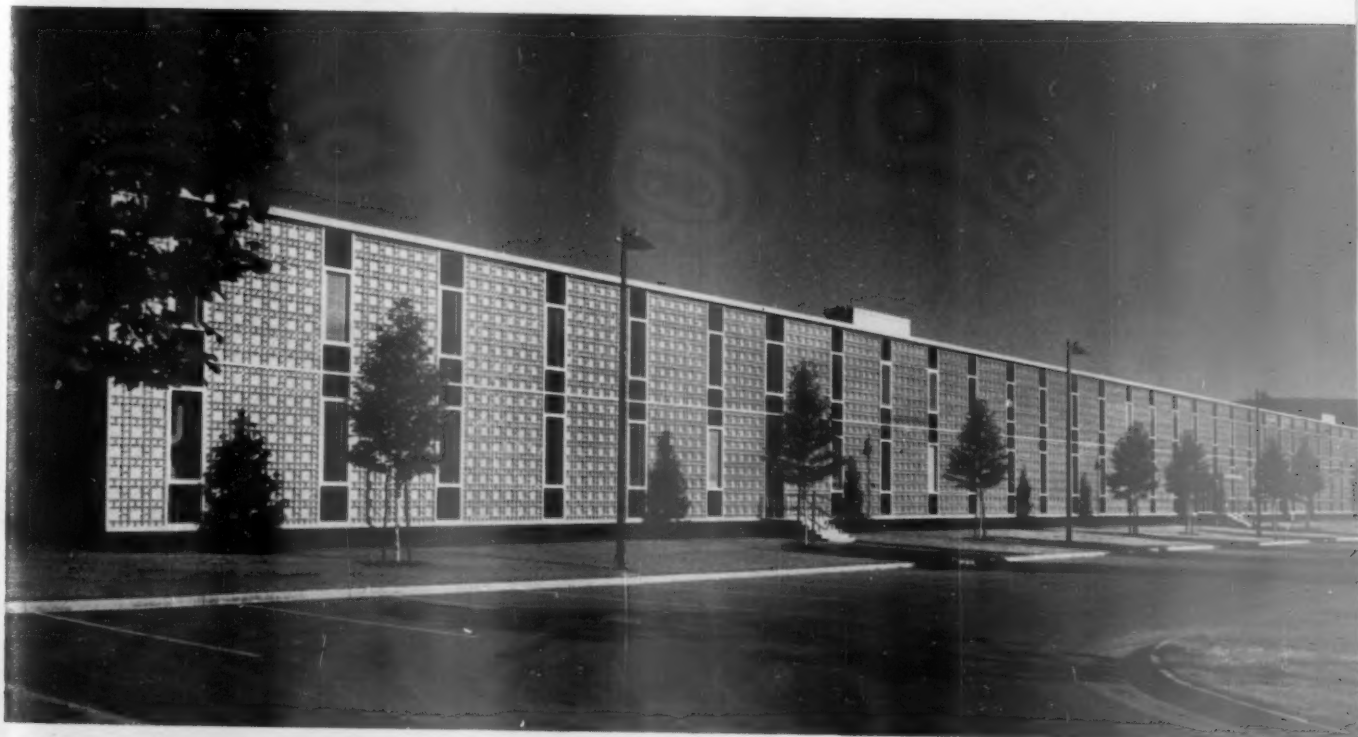
Add all this to reasonable initial cost, single trade installation and low maintenance, low surface condensation and good insulation value, privacy and protection with a better use of daylight. The sum total is a new range of curtain wall designs . . . flowing from the color, form and function blended in a growing line of PC Glass Blocks.

- A—John J. Kane Memorial Hospital, Pittsburgh, Pa.
Architects: Mitchell & Ritchey—Button & McLean, Pittsburgh
- B—City College of New York Library, New York City, New York
Architects: Lorimer & Rose, New York
- C—New York School of Printing, New York City, New York
Architects: Kelly & Gruzen, New York City
- D—Cromby Station of Philadelphia Electric Company, Philadelphia, Pa.
Engineering and Design: Philadelphia Electric Company
Consulting Architects: Harbeson, Hough, Livingston & Larson, Philadelphia
- E—Sacred Heart Seminary, Delaware, Ontario
Architects: Blackwell & Hagarty, London, Ontario
- F—Development Workshop Building, Corning Glass Works, Corning, New York
Architects: Harrison & Abramovitz, New York
- G—Highland Park High School, Highland Park, Illinois
Architects: Loebl, Schlossman & Bennett, Chicago





E



F

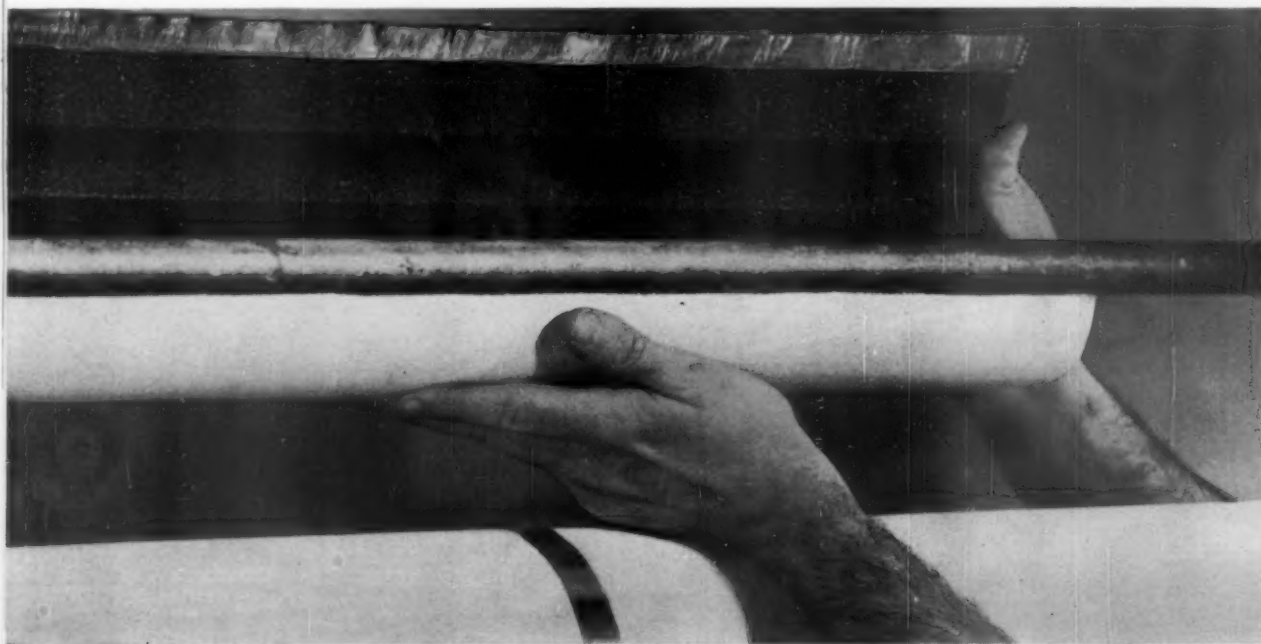
G

PC

example:

NEW FOAMGLAS® STAY-DRY PIPE INSULATION: long life, high performance, low cost for heating-cooling lines. Pictured here is a way you can avoid sacrificing insulation quality for cost on heating-cooling lines from +35°F to +350°F. It's Pittsburgh Corning's new FOAMGLAS STAY-DRY Pipe Insulation . . . at a cost comparable with other insulations used for commercial lines.

Only FOAMGLAS STAY-DRY Pipe Insulation gives you so many benefits. Sealed glass cells insure constant insulating value, eliminate extra moisture seals or vapor cut-offs. Easy to cut and shape. Standard 24" lengths with kraft-foil jacket. Incombustible FOAMGLAS makes fire retardant jackets unnecessary. Its high strength permits placing hangers outside the insulation, prevents insulation sag on vertical piping.



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P I T T S B U R G H **PC** C O R N I N G

On the Job, Automatic Tools Prove Virtuosos

Numerically controlled machine tools—which run almost untouched by human hands from instructions punched on tapes or cards—behaved beautifully in prototype form in the development labs (BW—Mar.21'58,p82). But almost no one expected them to duplicate the performance when they had to work for a living in production.

However, from the records of the new tools already in use, it's apparent that they are real virtuosos. They are working even better than their prototypes—so much so that they are beginning to revolutionize short-run metalworking production. And 75% of U. S. metalworking companies are concerned with short-run production. The accomplishments of the new tools will be exciting to the entire industry, though, whether the company is a small job shop or a giant manufacturer.

• **Three Strands**—Actually, there are three simultaneous developments in the field of numerically controlled tools:

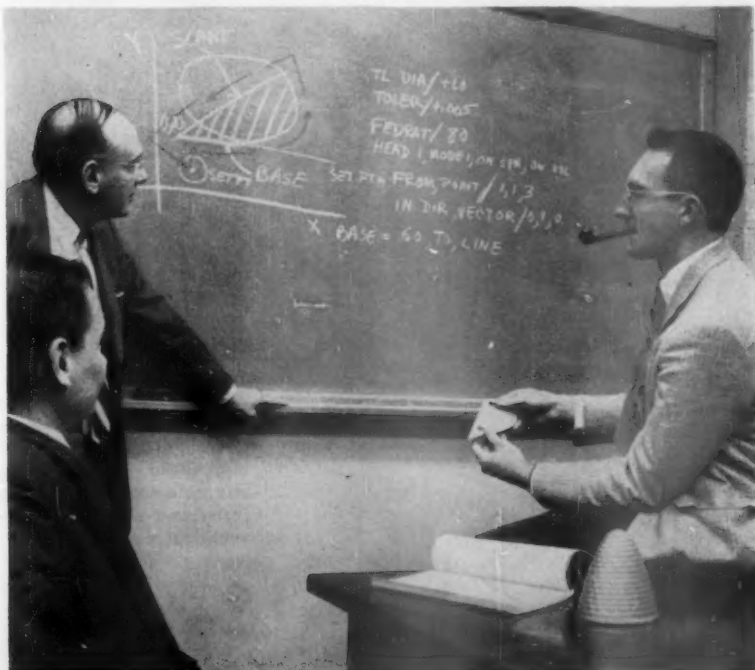
Case histories are revealing savings of 50% to 90% on production costs with numerical tools. The figures are ample to convince toolmakers and users alike that numerical control is much more than just another complicated

accessory. It's an improvement of impressive magnitude that can offset the higher cost of the tool by reducing direct and indirect manufacturing costs simultaneously.

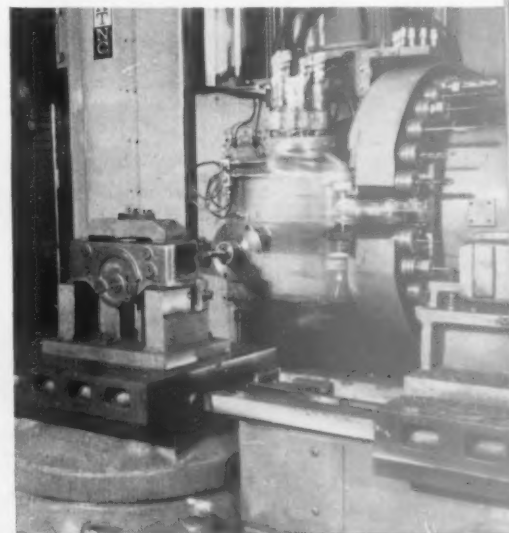
Manufacturers are beginning to introduce new standard tools that can take full advantage of the automatic techniques. The new generation includes, among others, Kearney & Trecker Corp.'s \$120,000 Milwaukee-Matic multipurpose machine tool (cover and pictures, right). All by itself, the K&T machine can interchange 31 different cutting tools and perform hundreds of operations in sequence without a touch from a machinist. Designed from base to spindle as a numerically controlled machine, it's three times more efficient than standard machines refitted for numerical controls, K&T claims.

New processes are speeding preparation of the tape that tells the machine tool what to do. In the past, one big objection to numerical control has been that it takes so long to process the data necessary for the machine's instructions. The argument was that it merely substituted drudgery on the calculator for drudgery with machine tools. Now tool and controls makers and users are

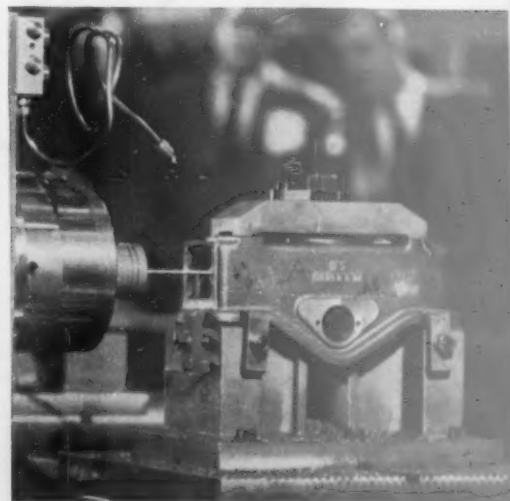
COMPUTER LANGUAGE devised at MIT simplifies programing of numerical tools. MIT researchers include J. F. Reintjes (standing, left), D. T. Ross (right).



NUMERICAL tool introduced by Kearney & Trecker first reams a hole in part . . .

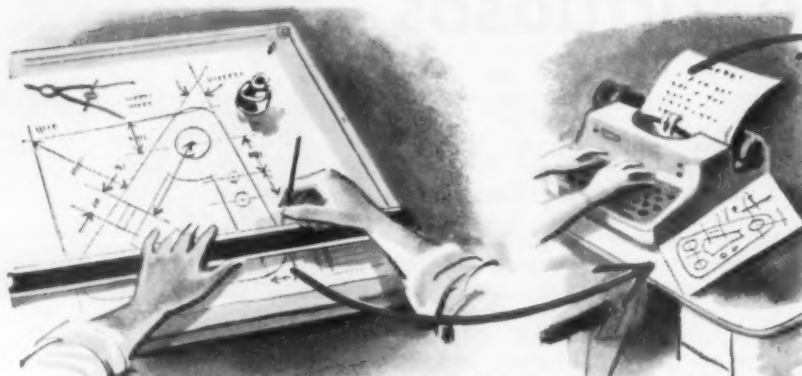


. . . then switches tools and puts work in position for center drilling . . .



. . . finally drills holes. Machine completed 49 steps in just 15 minutes, 20 seconds.

How Automatic Programing Turns Drawings Into Parts—in a Hurry (Story starts on page 77)



Draftsman makes detail drawing of part—often a simpler drawing than he would make for a skilled human machinist.

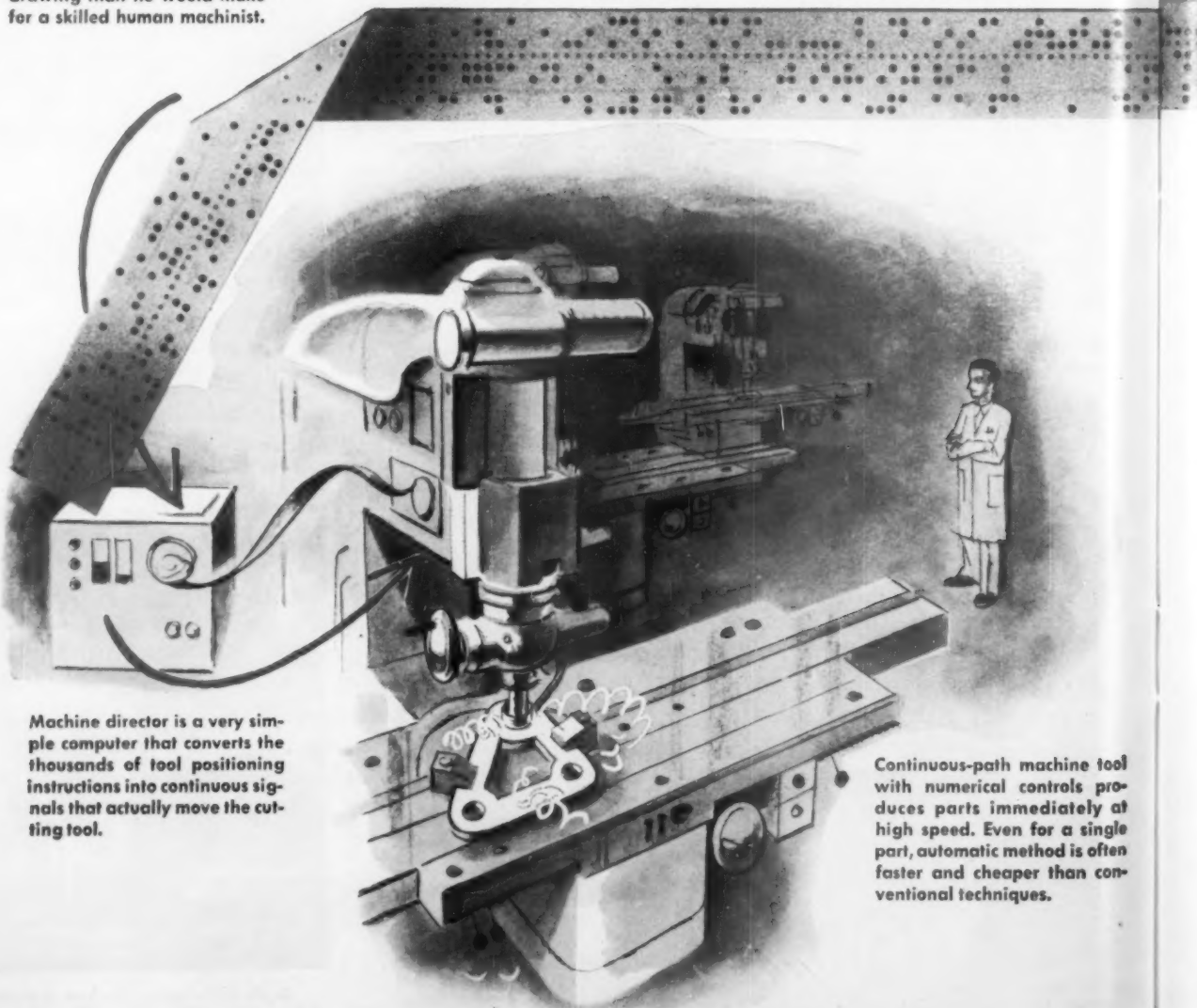
Programer translates drawing into words in APT language, describing tolerance, dimensions, tool sequence. This can be done in a few minutes.

TL DIA 1.0
TOLER .005
FED RAT/80

ON KUL, ON SPN, GO RT., TL
LEFT, CIRCLE/CENTER AT 2., 3.,
RAD 5.

MEANING:

Tool diameter 1 in., tolerance of cut .005 in., machine tool feed rate 80 in. per minute. Turn on coolant, turn on the spindle, go right with the tool on the left side of the circle whose center is located at the coordinates 2. and 3. and which has a radius of 5 in.



Machine director is a very simple computer that converts the thousands of tool positioning instructions into continuous signals that actually move the cutting tool.

Continuous-path machine tool with numerical controls produces parts immediately at high speed. Even for a single part, automatic method is often faster and cheaper than conventional techniques.

These instruction cards are fed into large computer, which figures out all the thousands of individual tool movements necessary to make the part.

Keypunch operator types APT-language description on electric typewriter, produces a punched card for each instruction.

Computer draws on library or "deck" of 10,000 punch cards, a sort of dictionary in APT language. This makes simple part description in APT language comprehensible for computer, so it can calculate specific dimensions, tolerances, and machine instructions.

Computer also "draws" the movements on a television screen for checking. Calculation step takes only minutes.

COMPUTER PRODUCES A PUNCHED TAPE THAT GOES TO MACHINE DIRECTOR

shortcutting the tedium. New programming techniques make it possible in some cases to turn out a control tape as cheaply and quickly as a detailed drawing.

The most promising method so far for some of the most complicated jobs blends the talents of the tape-controlled machine and the computer. It was developed by the servomechanisms laboratory at Massachusetts Institute of Technology, in conjunction with the Aircraft Industries Assn. and the Defense Dept.'s Air Materiel Command, and demonstrated publicly late last month (picture, page 77, and drawings, above). Called APT—short for Automatically Programmed Tools—the system makes use of a high-speed, high-capacity digital computer. In effect, it teaches the computer to understand a machinist—much simpler than it would be to try to teach a machinist to understand a computer.

Using the APT system, an experienced machinist's directions for producing a part can be converted in a few minutes by the computer into the hundreds—or even thousands—of machine tool positions necessary to do the job.

Without APT—or one of several similar techniques that are only a little less sophisticated—it would take a number of computer experts hours or days to process the data. Without a computer at all, a beehive full of calculator

operators could spend weeks or even years on the task.

• **Transfusion**—Machine toolmakers are counting on numerically controlled machine tools—which they abbreviate to NCMT—to rescue them from recession doldrums. Most of them, including K&T, don't intend to make the control equipment. They will leave that to specialists such as Bendix Aviation, General Electric, North American Aviation, Stromberg-Carlson, and a few others.

A few toolmakers—including Cincinnati Milling Machine, Pratt & Whitney, and Jones & Lamson—are going into the business of building control systems themselves, however, on the ground that such systems will involve a big chunk of the cost of the new tools.

• **Flurry of Orders**—For the controls manufacturers, business in the first two months of 1959 suggests that volume is due for an extraordinary increase.

"We've been swamped with inquiries, visitors, and requests to turn out samples," says George Knopf, manager of Bendix Aviation's Industrial Controls Div., which makes tape reading systems for machine tools. "Our sales are up about four times over last year."

At GE's specialty controls department, it's the same story. Sales of more than 100 units in the year's first two months were just about double the results for all of 1958. That represents a lot of money, since the controls alone

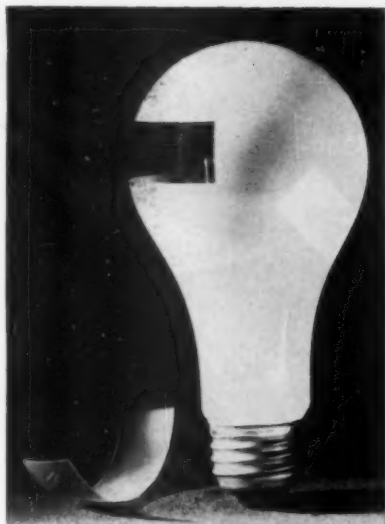
cost \$10,000 to \$80,000, and the machine tools usually come to several times that much.

I. A Look at the Record

One of the best illustrations of the new tools' exploits is the comparison made at Boeing Airplane Co.'s Wichita plant. Boeing produced certain parts on standard equipment, then transferred the jobs to numerically controlled tools and compared the costs.

One experiment was with the sculptured skin for a B-52-G jet bomber. On a tracer-controlled mill—an advanced machine tool in which the cutting tool is guided by tracing a stylus over a full-size model of the part—it cost \$18,467 to tool, plan, and set up for the job. With a numerically controlled mill, the same job cost only \$1,957—or only a bit more than 10% as much. It took the tracer mill 1,400 man-hours to turn out its first part; the ninth part required 750 man-hours. The numerical tool produced the first part in 700 hours—half as long—and the rate dropped to 200 to 250 hours per part after the fourth unit.

With another Boeing part, 8½ x 2½ ft. with a sculptured shape, it took five days from release of engineering drawings to production of the first part with a Keller-type tool—similar to the tracer-controlled tools used in making body dies for autos. With a numerically con-



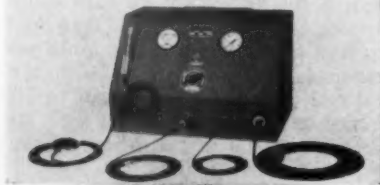
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trolled mill, the first part was finished 24 hours after drawings were released. The numerical mill completed its first part in 1.2 hours of machine time, compared with 25 hours the Keller-type tool required.

In another aircraft plant, transferring the machining of a wing flap fitting to numerical tools cut the time required in half. But, more important, the rate of parts rejected dropped from 50% to 2%.

• **Indirect Savings**—Properly used, numerical tools can make almost equally spectacular reductions in indirect manufacturing costs. For example, thanks to faster unit production, work-in-progress inventories can be cut. Since the control tape for a part is always on hand for use again on short notice, it's not necessary to produce spares for inventory. And with the faster ways for preparing tape, the lead time for production of prototype parts sometimes dwindles from weeks to hours.

Experience has shown, too, that the expensive new machines can write themselves off swiftly. Boeing figured that it could amortize the cost of a numerically controlled profile miller in 90 days if it produced 100 forming dies on it. Conventionally, the dies cost from \$3,600 to \$7,200. On the numerical machine, 75 dies cost only \$455 each. Figures like this would make numerical tools eligible for all sorts of die sinking jobs.

II. Two Types of Hardware

Industry can now choose between two types of numerically controlled tools. One variety is designed exclusively for point-to-point positioning. That means it will move a tool, such as a drill or a cutting head, to a specific spot and control the drilling or cutting at that spot. But it does not keep the tool under precise control as it moves from spot to spot. The other sort of tool makes a continuous cut, constantly under control. It will cut virtually any shape programed on tape.

• **Latest Example**—The point-to-point machine makes the same motions as a manually operated machine tool, but it makes them faster and surer. One of the most elaborate examples is Kearney & Trecker's new Milwaukee-Matic. Its tape control selects tools from a battery of 31 stored in a drum, like cartridges in a revolver. It can rotate the tool at 100 to 4,000 rpm. and cut at speeds of 1 to 99 in. per minute. The machine will make circular cuts from 0.1 to 9.9 in. in radius, and it can handle simple slopes and arcs. In one setup, it can rough cut, finish cut, drill, ream, tap, and bore. Tool changes take only nine seconds.

"By minimizing setup and positioning time and by combining five operations in one machine, the M-M can be

kept in operation well over 75% of the time," crows Francis Trecker, president of K&T. Standard machines, he says, are doing actual cutting only 15% to 25% of the time.

K&T hopes to sell 55 to 60 of its Milwaukee-Matics this year, 300 a year by 1961, by which time it will have three larger models in production.

• **Cutting Curves**—Point-to-point positioning tools can cope with most machining jobs that require some combination of circular or straight-line cutting. Control makers estimate that point-to-point systems will account for 80-90% of unit sales. But when the part has to be sculptured, as in aircraft, a much more complicated tool-control is needed. For cutting three dimensional curves and the like, a machine requires as many as 200 instructions per second.

Government procurement for the aircraft industry was responsible for the rapid development of the complex new numerical tools. The Pentagon spent close to \$30-million on 63 new numerical control machines and 42 conversions. This brought the devices to their present maturity, and several aircraft companies have now ordered similar equipment on their own.

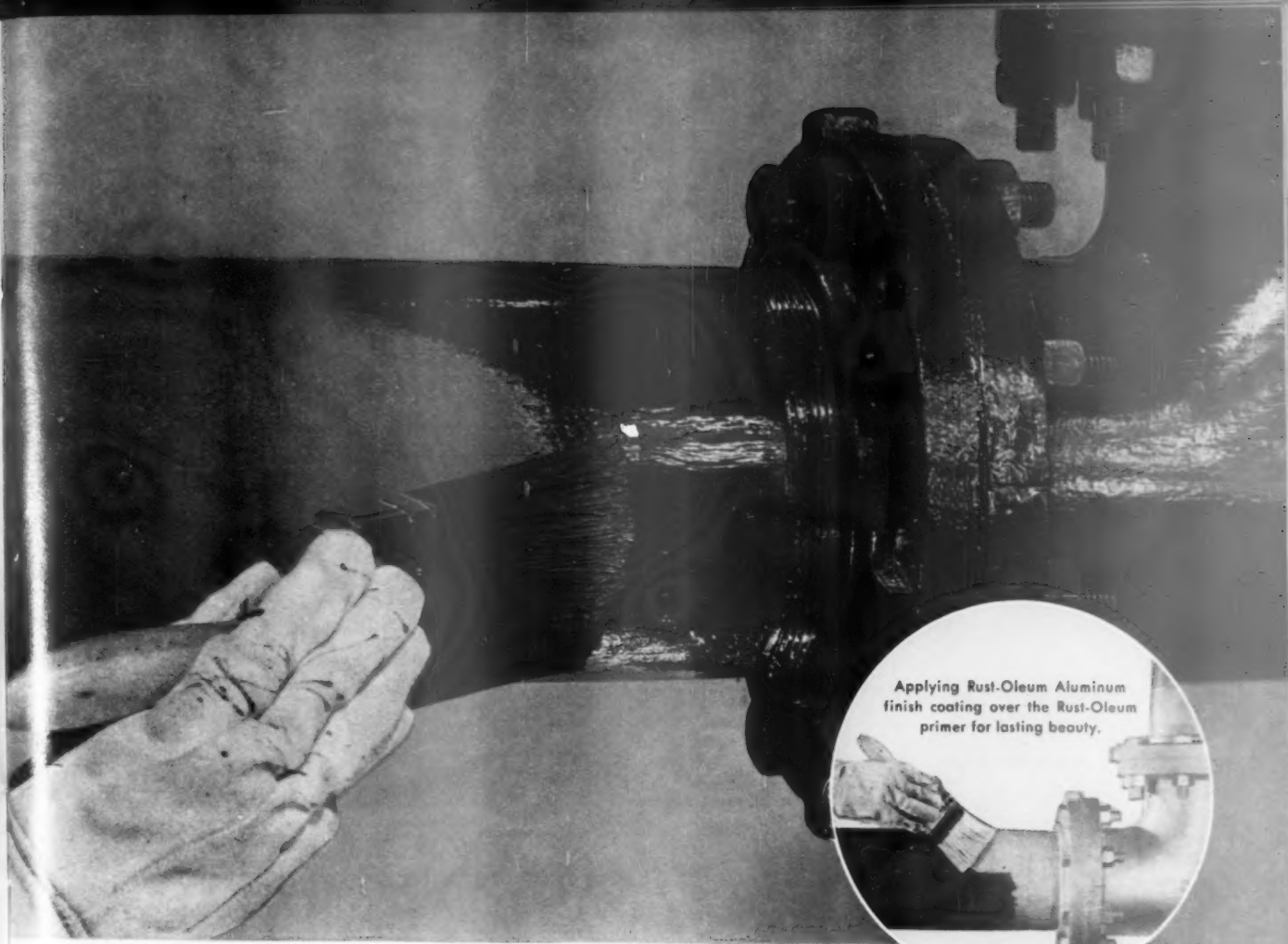
The bulk of the large contouring machine tools—skin mills and profilers—were manufactured by K&T, which has shipped 31, and Giddings & Lewis, of Fond du Lac, Wis., which has produced 30. Cincinnati Milling and others have made equipment in lesser volume.

• **Cost Picture**—Of course, point-to-point systems are much less costly than the continuous path tools. GE point-to-point systems that control motion of the tool or work along two axes cost about \$15,000, in addition to the price of the machine tool. Bendix Aviation has just introduced point-to-point systems in a similar price range.

Continuous path systems with two-axis control cost around \$50,000, plus the price of the tool. And a five-axis system—which might include angular control of the cutting tool in addition to movement in three directions—will add \$75,000 to \$85,000 to the tool bill. Total cost for a big numerically controlled mill for aircraft could come to \$250,000 to \$500,000.

III. Talking APT Language

The birthplace of continuous path milling was MIT's servomechanisms lab, where researchers operated the first continuous-path milling machine with numerical controls in the fall of 1952. It was immediately obvious that the automatic machine was mechanically practical. The trouble was that it took so much time to figure out what data to feed into it that a company's engineering department could



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AMERICAN-SAINT GOBAIN CORPORATION is a merger of the former American Window Glass Company, Pittsburgh, Pa., and the former Blue Ridge Glass Corporation, Kingsport, Tenn. (which was a wholly-owned subsidiary of Saint-Gobain of Paris, France). American Window Glass Division plants are located in Arnold, Jeannette, Ellwood City, Pa.; Okmulgee, Okla. Blue Ridge Glass Division plant is located in Kingsport, Tenn.

"... a melding of electronics, metal cutting, electrical engineering, and computer technologies ..."

NUMERICAL TOOLS starts on p. 77

be submerged. So the MIT group turned its attention from the mechanics of numerical controls—on which industry was beginning to focus on its own anyway—to the problem of developing simpler ways to program the new and complex tools.

It was obvious to the researchers that their only recourse was to harness big, general-purpose computers to do the preliminary figuring that otherwise would bog the engineers. By 1956, they had a pilot system linking the large computers with numerical tools. It vastly simplified programming of tool jobs involving different combinations of cuts in lines and circles.

• **Complete Directions**—Basically, in MIT's method, a general-purpose computer takes an instruction—such as "cut a circle with a 5-in. radius at point 2-3"—and decides all the separate tool positions, perhaps running into the hundreds, that will be necessary to carry it out. These directions are then fed to the numerical tool.

One reason why instructions have to be broken down into such complexity is that the tools give contour to a piece of metal in a series of short, straight cuts. It may take as many as 500 changes in direction to cut a single circle by this method. The computer can calculate exactly what the length and position of each cut should be—and do so in minutes for an entire part.

In January, 1957, the MIT group reported on its new system to the Aircraft Industries Assn., which decided to accept it as an industry standard.

• **Special Tongue**—The key to MIT's system is the special language the researchers developed for the computers. Called APT, after the system, it has some resemblance to English, but so far its vocabulary consists of only 107 words, plus numbers (drawing, pages 78 and 79). A technician translates into APT language the description of a part to be tooled, and from this description the computer, which has previously digested the logic and rules of the APT system from a master deck of 10,000 cards, goes to work. The computer calculates the tool positions required to make the part and spews out a punched tape which can direct the machine tool control system. Equipped with this deck—a kind of dictionary of APT—an ordinary general-purpose computer can master the APT system in a few minutes.

At the moment, the system can be used to program the machining of any part—or portion of a part—that can be constructed with a ruler or compass or

by a simple quadratic equation, such as the equation describing an ellipse. This means that it is limited to planes and cylinders and relatively simple curved surfaces. The next step is to teach it to handle more complex three-dimensional curves within surface areas. If APT learns that lesson, numerical tools will be able to perform just about any die sinking or machining job in industry.

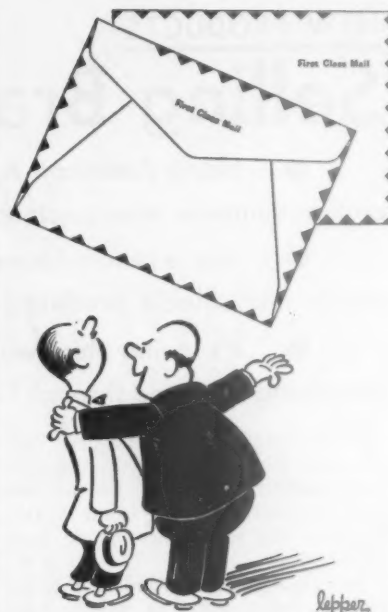
• **Economics**—At the moment 19 companies, most of them aircraft manufacturers, can use the system, thanks to owning sets of the master deck of APT punchcards. As a deck holder, a company is committed to assist in improving APT by adding subroutines or by carrying out projects assigned by MIT researchers.

An engineer for North American Aviation vouches for APT's virtues. "There is no question at all," he says, "that we can turn out single pieces using APT for less than it would cost to hand-make one North American part. That includes all the cost of computer time, programming work, and machinery time. Obviously, if we can produce a one-shot piece at less cost, the savings mount up phenomenally if we need a production run of half a dozen or a hundred."

With APT, the North American man adds, time needed to prepare a program has been reduced 50 or 100 to 1. For one part, it took 200 man-hours to prepare a machine tape with manual calculators; with APT, it took four hours. As a general rule, a control tape can be finished in the time it ordinarily takes just to make a detailed working drawing.

• **Revolution**—Between the surprising efficiency of new numerical tools and the ease with which they can now be programmed, automatic machine tools should become increasingly attractive to industry. As they spread, they will bring drastic changes. Already, numerical tooling is revising concepts of design, inventory, computing costs of short-run production, and production scheduling methods, as well as some basic drafting practices. It is also frightening some labor leaders, who foresee a loss of jobs.

Plainly, at first the new tools will create more problems than they will solve. But it's just as plain that they are not just a refinement of an existing method—a better automatic screw machine, say. They represent a melding of electronics, metal cutting, electrical engineering, and computer technologies into a really new approach to an old problem. **END**



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14-2

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NEW PRODUCTS

Selling Brainpower's Byproducts

- North American Aviation, burned in first postwar civilian ventures, tries another approach in big, new push.
- Aim is to turn ideas spawned by its technical brainpower into salable products, find right markets for each.
- It's doing this two ways—by expanding its data processing arm, and through "invention marketing" subsidiary.

For a company looking for new product ideas, the lot of North American Aviation, Inc., able to pick the mechanically inventive brains of some 57,000 engineers and technicians, would seem to be ideal.

Just about everybody in the aviation industry has thought so, at one time or another, and—like North American—has dropped millions of dollars, on everything from over-engineered private planes to aluminum dinghies, in proving it isn't so easy as it looks.

The catch has been this: how to market commercially the wild mix of gadgets, inventions, and processes dreamed up in turning out today's super-expensive and super-complex missiles, planes, and electronic systems.

• **New Try**—But North American feels the potential is still there. In the past months it has been readying for another try at the commercial market with what it hopes will be an unbeatable combination.

This week, its Autonetics Div., currently operating at the \$100-million-a-year level turning out military electronics equipment, announced it was setting up an Industrial Products Office on Los Angeles' swank Wilshire Boulevard. The purpose: to market its Recomp II, general purpose computer, and its Numill machine tool control. Company hopes are that within 10 years a fully grown industrial products division will be realizing \$60-million to \$100-million a year.

Already in operation across town, with a salesman-like zest and flair not normally found in a defense industry, is the aviation business' first invention marketing subsidiary, Navan Products, Inc. Its job is to spot new ideas, developed both by North American's own engineers and outside inventors, and turn them into salable products—backed by a marketing program tailored to the needs of each. Its product portfolio ranges from high precision saws for slicing wafer-thin semiconductor materials to ingenious clip fastenings for packing crates.

• **False Start**—The aircraft industry's

first flirtation with commercial products began when the bottom fell out of the plane-building business after World War II. North American's brass, in the same fix as others, leafed through mail-order catalogues, noted every item the company could conceivably build—kitchenware, incinerators, and so on. The shock came when cost calculations overshot the catalogue price by 30% in each case.

The company decided it should stick to planes and military hardware. But it took an \$8-million loss on a small private airplane—the still popular Navion—before it abandoned the civilian market.

Its first halting reentry came when its Atomics International Div. began to sell a few atomic reactors for research and power (BW—Sep. 4 '57, p140).

• **Hard Core**—Its full-fledged return is based on a new approach. It has learned the hard way that its expensive plane-building tools, geared to fairly small quantities of finely finished precision parts, can't compete in turning out mass-produced consumer products. So, this time it's betting on its brainpower, and feels that the rapid changes in technology, which have put increasing emphasis on electromechanics and electronics, are its hole card.

In selling computers to commercial customers, Autonetics' Industrial Products Office will be competing with such customers as International Business Machines, Sperry-Rand, Burroughs, Royal McBee, and Bendix. But it feels it has already learned how to compete successfully with them in the military arena, for contracts on navigation-bombing systems, flight-control systems, inertial navigation systems, and automatic checkout systems designed to take over a lot of the nerve-racking pre-firing checkout work of a countdown.

• **Hedge**—The commercial gambit is also a hedge against the uncertainties of military business. About 40% of Autonetics' business, for example, was in making the inertial navigation system for the Navaho missile. When Navaho

was canceled in July, 1957, Autonetics had to drop 2,500 people.

North American's directors filled the breach by speeding up development of products already under way. Now Autonetics is back to about 8,600 employees, should reach 10,000 next year.

• **Promising**—Autonetics won't stop at two products—the Recomp computer and Numill machine tool control—but will expand in the data processing field, with both smaller and larger computers, and other tape-control machine tool systems.

But North American thinks automatic checkout equipment is the real sleeper. This acts as electronic crew chief, checks out a missile sequentially while keeping tabs on itself, too, as it goes along. It switches from one control to another, turns valves on and off, conducts tests and analyzes results—doing more accurately in minutes what takes human beings hours.

Commercially, this can test automatic equipment that runs factories. And within hours, it can check out huge computers before delivery—a task that otherwise takes months.

• **Aggressive**—Autonetics' aggressive commercial plans include setting up sales and service offices in Chicago and New York within the year. It hopes to have 26 offices in three years.

North America's board has also committed several millions to a leasing arrangement—for that, says Autonetics' general manager, John R. Moore, is "what everybody wants today."

• **Unorthodox**—Cashing in on the hundreds of inventions and devices spawned by North American's brainy technical and production departments demands an even more varied and unorthodox approach. North American's answer is its wholly owned subsidiary, Navan Products, Inc., now a bit over a year old. Navan's 29-man staff is expected to be light on its feet and imaginative in assessing commercial possibilities of a new product, and figuring out the best way to market it.

North American used to license out its sideline discoveries until it realized it was giving away gold mines—for example, in turning over its chemical milling patents to an outside company. These patents, the basis for a new metal forming industry, have been relicensed to 41 companies.

• **Flexibility**—Navan administers North American's 200-odd licenses, but only as a sideline. Its primary job is as an expeditor of new inventions.

Navan's means of finding its new inventions are fairly standard. Its flex-

How bundling fraction-of-case units with Avisco® cellophane can help your distributors



Any distributor who ships products to retail outlets recognizes bundling as a source of operational savings. He counts on bundles of anywhere from 3 to 24 packages of a kind (depending on the product, of course) to divide the contents of a shipping case into easy-to-handle units. This simplifies distribution.

Cellophane, paper wraps and boxes are all widely used for bundling. But that's where the similarity ends. For cellophane offers advantages no other packaging material can match.

Taking inventory and making up orders become easier with cellophane. Its true transparency permits product visibility from the top, bottom and 4 sides of the bundle. Result—instant identification, faster count and reduced shipping errors.

And, nothing compares with cellophane for complete protection against dust and moisture, and sealing in freshness. This means longer shelf life.

Distributors also prefer cellophane bundling because

it wins favor with their retailers. Bundles can often be used as shelf displays without unwrapping until old stock is gone. This assures fresh, clean merchandise.

All these advantages mean savings in time and money for your own distribution organization and your wholesalers. They also give you and your wholesalers an extra selling tool.

But that's not all. In your own plant you can save bundling dollars with Avisco cellophane. It eliminates the need for printed or labeled boxes and paper overwraps; sails through your packaging machines more efficiently; seals easier and more securely—with heat alone. This heat sealing combined with cellophane's strength and rigidity result in a strong, secure, neatly formed bundle. What's more, cellophane substantially reduces packaging material inventory and the storage space it requires.

We offer a complete packaging service to assist you, and demonstrate how Avisco cellophane, plain or printed, will answer your bundling requirements better and more economically than any other material. Phone or write us for an appointment with our representative in your area or a selected cellophane converter specializing in your field.

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We manufacture almost all the products needed to give any modern building these all-important power and communication facilities. The line includes Spang Underfloor Duct; Spang Rigid Conduit; and Spang Electrical Metallic Tubing.

These electrical distribution products are manufactured a little better than the specifications demand, just as we produce National Oil Field Machinery and Spang Steel Pipe with an extra margin of performance and quality. We don't know of any better way of making and keeping friends.



THE NATIONAL SUPPLY COMPANY

Subsidiary of Armco Steel Corporation



TWO GATEWAY CENTER, PITTSBURGH 22, PENNSYLVANIA

ibility in marketing its more promising inventions is really the key to the company's hopes. It puts great store in a new kind of salesman it is calling a Nav Rep, and is looking for younger, more aggressive men with an imaginative flair in promoting new products. Nav Reps at first will handle other lines, too, but eventually the company hopes to make them Navan specialists.

Navan will also work with distributors and other manufacturer representatives when this makes the best sense.

Testing the market is an important part of the whole scheme. Navan will also send out a new product release to 120 business and trade publications, postcards to 3,000 companies, watching the response to each.

Navan will not handle a product requiring too much product engineering or development.

- **Results**—In its first fiscal year of operation, Navan's estimated sales were \$925,000, putting it barely in the black. Expenses of expansion and acquiring the right to some outside products are expected to dip it into the red briefly. But the speed with which it's taking on new products indicates that North American's brass doesn't expect this to last very long.

- **Line**—Navan now has up its sleeve:

- The Klimp, a little spring steel device for holding packing crates together without nails. It makes possible re-use of crate parts.

- Tens-50, an aluminum-casting alloy of sodium and beryllium that eliminates embrittlement problems common to most aluminum-casting alloys.

- The Diatronic diamond cutting wheel, which makes big savings in dicing costly silicon and germanium.

- The Navkut Precision Cut-Off Saw.

- Sabrex, a sprayable coating that protects stored parts from corrosion.

- The Natorq Static Seal, a leak-proof seal for aircraft and missile fuel and hydraulic fittings.

- The Navent Vent Seal, a valve that permits precision rocket engine assemblies to breathe out excess gases without sucking in contaminants.

- **What Others Do**—A number of other companies have developed sideline products, too (BW—Feb. 23 '57, p105), but nearly always license them out for manufacture and sale. An exception is Douglas Aircraft Co., which sells its Aircomb paper honeycomb material to all comers; outside sales of \$2-million account for 75% of production. Last year Douglas and General Aniline & Film Corp. formed Data Graphic Systems, Inc. to make and sell machines designed by Douglas for microfilming, storing and projecting blueprints. **END**



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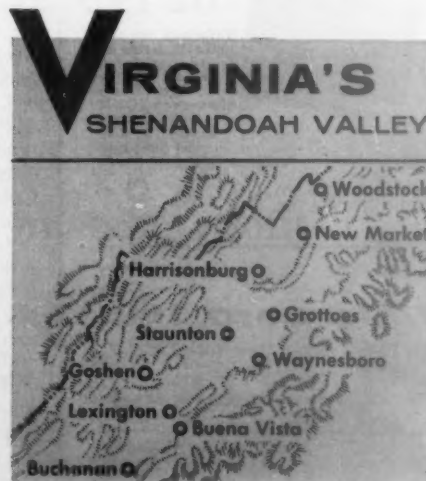
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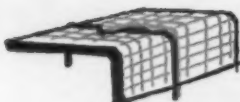


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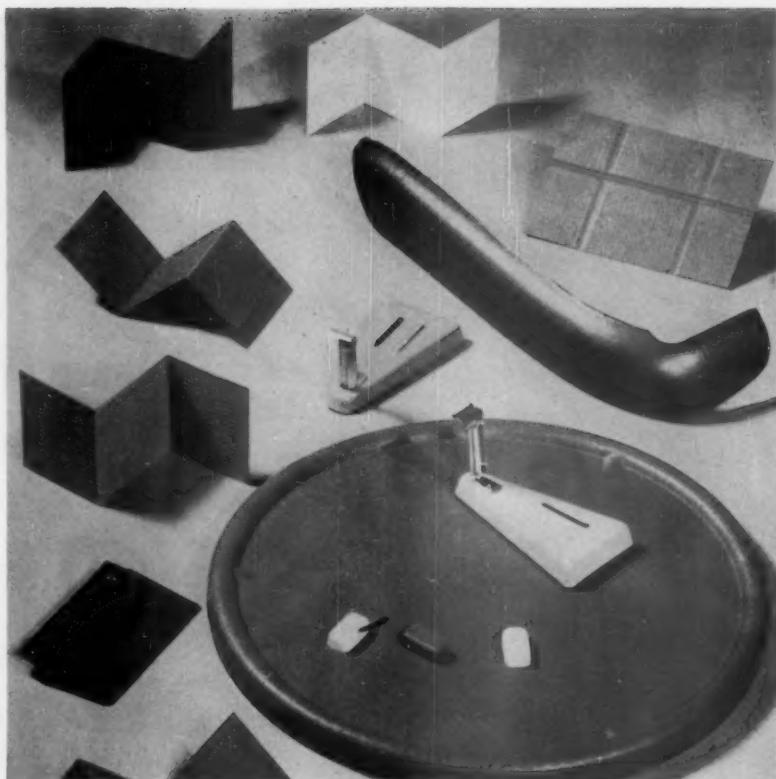
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Steel Wears Vinyl Skin

The objects in the picture look like plastic to the casual eye, but it's only skin deep. Underneath, they're steel. They're made of a new kind of vinyl-coated steel developed by United States Steel Corp.

Unlike conventional laminates of vinyl fabrics and steel sheets, the new material is made by applying liquid vinyl to coils of steel. Once cured, the vinyl can be embossed with a variety of textures. After finishing, the vinyl-coated steel can be treated like ordinary steel—it can be formed, drawn, welded, and otherwise fabricated into products without distorting the surface or hurting the bond. At present, vinyl-coated steel is being made only in solid colors; laminates can be multicolored.

• **Continuous Process**—A big advantage of the new material is that high-volume production economies are possible because it's made in a continuous process. Cold rolled or galvanized sheets are fed into a cleaning unit, then slightly etched before being roller coated with a thin film of thermosetting adhesive. If required, a primer is then applied to the reverse side of the sheet as a corrosion preventive. These coatings are simultaneously cured in an oven; the liquid vinyl is then applied by a reverse roller coater and heat cured on the steel to produce a permanent bond. Finally, the steel passes through embossing rolls,

which impress a texture on the vinyl; after cooling, the product is either coiled or cut to length.

With this kind of process, U. S. Steel expects to sell the product to its regular mill steel buyers. The corporation anticipates a wide variety of end uses for the product. Applications might include automotive bodies and interiors, chairs and office equipment, and railroad car panels. For fabricators and users, it will save painting, increase durability, and resist flame, heat, moisture, and staining.

Vinyl-coated steel sheets will be available in thicknesses from 18 to 28 gauge, up to 52 in. wide. Varying hardness and gauges of vinyl are available.

Pittsburgh Steel Co. recently introduced patterned sheet for end uses such as those foreseen for vinyl-coated steel (BW—Feb. 21 '59, p36). It provides the texture but not some of the other advantages of a vinyl-coated metal. Some steel industry observers think this may be tougher competition for the USS product than vinyl-steel laminates because it also has production economies.

Cost of USS vinyl-coated steel will run about 2½ times the cost of untreated drawing quality sheets. That's figured on a base price of 35¢ a sq. ft. for 18-gauge steel in 20,000 sq. ft. lots, ranging down to 20¢ for 28-gauge steel on the same basis. **END**



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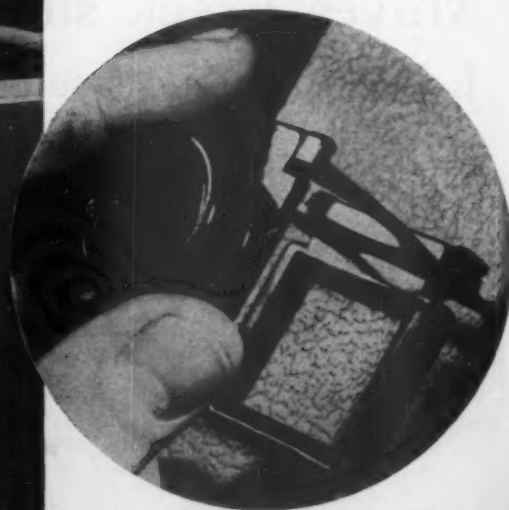
Pittsburgh Steel's patterned sheet gives leather-appearance to the new custom furniture-styled L-1000 Laundromats shown here on way to final inspection.

An Industry First . . .

Pittsburgh Steel Has Beauty of Leather On Westinghouse 'Furniture-Styled Twins'

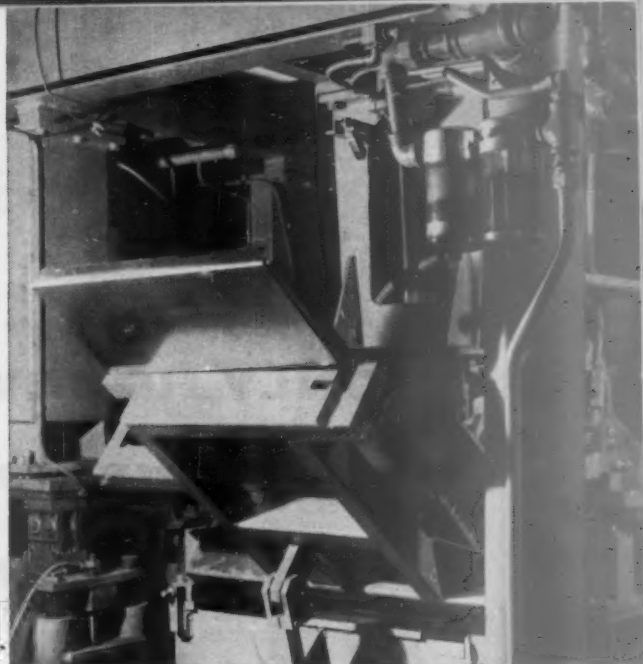


Soft, rich finish on a group of Laundromat shells is checked at one of the many quality inspection points. Close-up shows detail of the L-1000's pattern.





Fully as formable as Pittsburgh Steel's regular plain sheets, the new patterned sheets are put through Westinghouse's normal production process at Mansfield, Ohio.



Top quality in sheet, plain or patterned, is needed to serve Westinghouse's automated equipment. Here, patterned sheet is formed into the shell of the L-1000.

First time pattern- rolled steel available in wide steel sheets

Wide patterned sheet steel—a new product and a Pittsburgh Steel Company “first”—has been put to work by Westinghouse Electric Corporation on its new line of custom “furniture-styled” appliances.

Wider than any patterned sheet available until now, the new sheet is designed and finished to appear like fine-grain leather. It's being used as the outer shell on Westinghouse's newly introduced L-1000 Laundromats and D-1000 automatic electric dryers.

Pittsburgh Steel's Allenport (Pa.) Works is the steel industry's first producer of patterned, flat-rolled carbon steel in widths up to 48 inches—about twice the width previously available.

Patterned sheet is available in coils or cut lengths, in either commercial or drawing quality. As flat, formable and drawable as Pittsburgh Steel's plain sheet, super-wide pattern-rolled steel goes through Westinghouse's regular production process without special machine changes.

Patterned sheets are given 27 piercings and notchings, in addition to a four-side flange. At Westinghouse, the rolled-in pattern emerges unmarred, even on corners and bends.

Next step is welding and then the sheet is formed into the appliance's

shell. After bonderizing, the shell gets a sprayed-on enamel coat which is baked. Soft wood-toned in color, the enamel helps emphasize the attractive, but rugged, leather-like finish.

• **Shape of Tomorrow**—But surface is only one quality standard Pittsburgh Steel meets. The Shape of Tomorrow theme in Westinghouse appliances requires clean, pronounced lines. As a result, bends and corners are sharper on the L-1000 and D-1000 models. This imposes extra requirements for uniformity of hardness so that the patterned sheets won't overbend or spring back.

Flatness specs must be met rigidly so that the finished appliance isn't plagued by an “oil-canning” effect.

Westinghouse has automated so much of its production sequence at the Mansfield, Ohio, plant that steel suppliers know gauge and dimension specs must be held rigidly. If they aren't, rejects and scrap losses would mount rapidly.

Pittsburgh Steel's patterned sheets are performing so well at Westinghouse and in other ap-

plications that a promising future is being predicted for the product, especially in the automotive, appliance and building industries.

Patterned sheets are suitable for any application where decorative appeal is needed, in addition to steel's strength, formability and economy.

Produced on one of the steel industry's most modern sheet mills, patterned sheet complements Pittsburgh Steel's full line of hot and cold-rolled carbon steel products.

Supplementing this product is cold-rolled strip steel produced by the Thomas Strip Division, Warren, Ohio, whose line also includes pattern-rolled strip—plain or with a variety of protective and decorative coatings. These include copper, brass, nickel and zinc.

If you are a manufacturer of a product made from flat-rolled steel, you can't afford to pass up potential improvements in your production process or the sales zip this imaginative patterned steel can give your product. Contact any of the district sales offices listed on this page.

Pittsburgh Steel Company

Grant Building

Pittsburgh 30, Pa.



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We believe the bold statements you're about to read will convince you Honeywell 800 merits your company's immediate investigation, whether you are now using — or considering — an electronic data processing system.

1. Honeywell 800 can do up to 8 different, independently programmed jobs simultaneously — business, scientific, or both. Now you can run off a payroll, update inventory, and schedule production all at once, and all as independent jobs. And you can solve a scientific problem, too — *while this data processing is going on.*

2. Honeywell 800 processes small volume applications economically. Only a minimum amount of equipment is needed to capitalize on Honeywell 800's tremendous speed and *parallel processing* ability. Hence, relatively small companies can reap the benefits of this System.

3. Honeywell 800 can expand its capacity in small, economical stages. The basic capacity of Honeywell 800 can be expanded indefinitely to accommodate your company's long-range growth. It can be increased at any time in small steps and at small cost. You need never make additions you can't efficiently and profitably use.

4. Honeywell 800 can grow without limit to meet your future needs. You can't outgrow Honeywell 800. Its tremendous potential capacity plus its ability to operate more than a dozen data processing devices simultaneously make it your profitable partner *indefinitely.*

5. Honeywell 800 ends the problem of reprogramming (with its heavy costs). Honeywell 800's ability to expand without limit means you will never have to pay the stiff price of reprogramming. Nor are complex programs needed to utilize the full efficiency of the system's parallel processing; a single powerful control unit super-

vises each independent operation speeding in parallel.

6. Honeywell 800 can process many business jobs independently, in no more time than it takes to do the longest job alone. "Automatically controlled parallel processing" enables you to utilize the high speeds of Honeywell 800 with maximum efficiency. Your processing needn't wait for such relatively slow mechanical operations as card reading or printing.

7. Honeywell 800 can solve complex scientific problems more efficiently than computers marketed for this purpose. We conservatively estimate that Honeywell 800 is 30% more efficient as a scientific computer than the best-known scientific computers commercially available. (And remember, Honeywell 800 can solve scientific problems *while* it processes business data.)

8. Honeywell 800 can process more data per dollar in a working day than any other system. Competitively priced, Honeywell 800 can process your entire day's work smoothly and on schedule by operating your key programs in parallel and controlling them automatically. In *any* working day Honeywell 800 can process your data at less cost than any other system.

Both the equipment and the programs of Honeywell 800 are backed by years of experience — and the kind of service you have come to expect from Honeywell. As with the Honeywell DATAmatic 1000, this exciting new system can be leased or purchased.

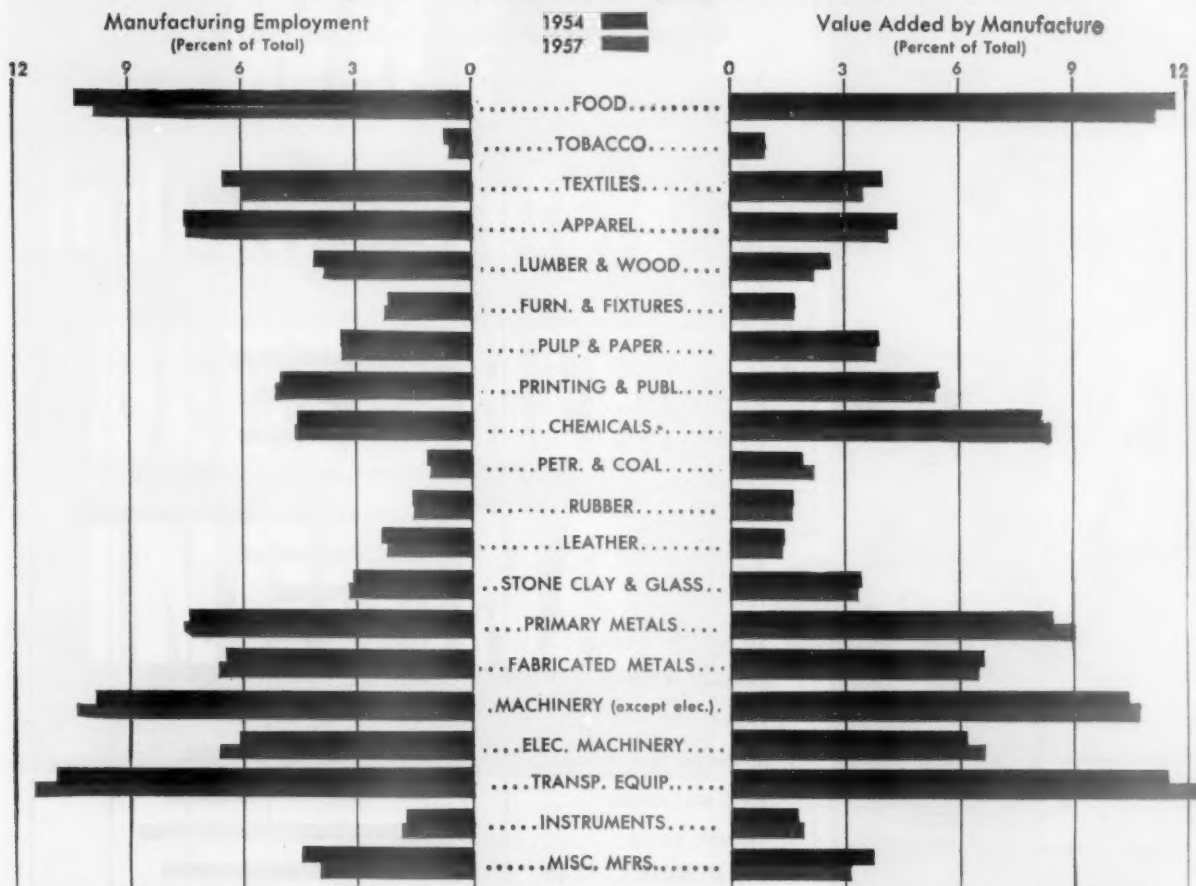
For full details and specifications of Honeywell 800, write Minneapolis-Honeywell, DATAmatic Division, Dept. B1, Newton Highlands 61, Massachusetts.

Honeywell

 **DATAmatic**
ELECTRONIC DATA PROCESSING

CHARTS OF THE WEEK

Relative Importance of Manufacturing Industries 1957 Vs. 1954



Data: Bureau of the Census; U.S. Dept. of Commerce.

©BUSINESS WEEK

How Manufacturing Groups Rank in Importance

The profile of American industry changed only slightly in the three-year period from 1954 to 1957, according to the recently released 1957 Annual Survey of Manufactures. In terms of manufacturing employment and value added by manufacture, no single industry fluctuated more than 0.9% in its relative importance as a percent of the U. S. total.

As job providers, nine industries increased their share, eight declined slightly, and three remained the same. As producers of value added by manufacture (shipments less cost of materials, etc.), eight industries accounted for a larger contribution in 1957 than in 1954, nine slipped back some, and three were unchanged.

Most important single contributor to the U.S. economy in 1957 was the transportation equipment industry (including motor vehicles, aircraft, ships

and boats, and railroad equipment), which provided 11.5% of total manufacturing jobs and 12.4% of value added. Food ranked second in value added with 11.2%, but, with its high degree of mechanization, was third in employment. Machinery took second place as a job provider and ranked third in value added. These three industries alone—transportation, machinery, and food—accounted for 32% of all manufacturing jobs and produced more than 34% of total value added by manufacture.

Others in the "top 10" manufacturing industries, ranked in order of value added, are primary metals, chemicals, electrical machinery, fabricated metals, printing and publishing, apparel, and pulp and paper. These 10 industries accounted for 78% of the total value added by manufacture during 1957, and 74% of manufacturing

jobs. The textiles industry ranked eighth in employment but only made 11th place in the value added listing.

Within some industries, sharp differences may be noted in ratio of employment to value added. The apparel industry, for example, provided 7.6% of total jobs but only 4.6% of value added, reflecting low output-per-man-hour. In the same way, textiles contributed 6% of employment but only 3.5% of value added. On the other hand, the chemical industry, where productivity is high, accounted for 4.6% of total manufacturing employment and a substantial 8.4% of value added.

Among the smaller industries, petroleum and coal took a mere 1.1% of jobs, but doubled that share in value added with 2.2%. Here, too, mechanization is a big factor. The leather industry, where handcraft still



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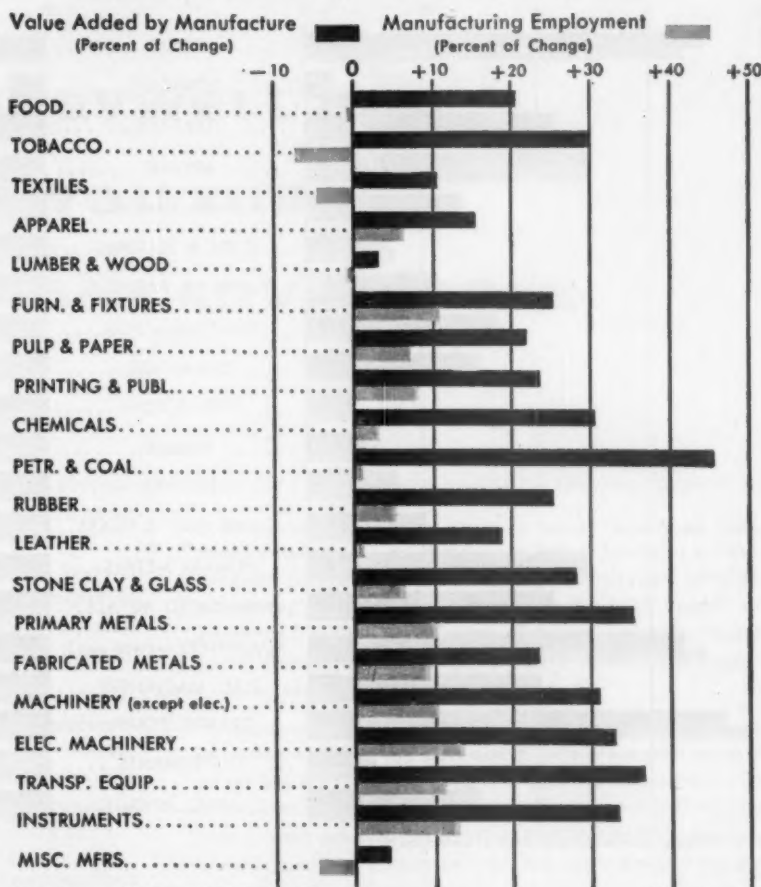
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plays an important role in quality items, employed 2.2% of the manufacturing labor force but produced only 1.3% of value added. Furniture and

fixtures provided 2.3% of jobs but dropped back to 1.7% in value added. Here, also, luxury pieces require much hand work.

Change In Manufacturing Industries 1957 Vs. 1954



Data: Bureau of the Census; U.S. Dept. of Commerce.

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Manufacturing Value Up Sharply

From 1954 to 1957, total value added by manufacture rose more than 26% while manufacturing employment increased only 6%. During this same period, gross national product went up 21%.

Within individual industries, surprising shifts occurred during the three-year span. The petroleum and coal industry saw a 45.5% increase in value added with only a 1.1% increase in employment. In tobacco, value added rose 30% while employment declined 7.4%. Notable gains were made in the relatively small instruments industry, reflecting the rising demand for scientific instruments and industrial process equipment. It added 36,000 jobs, or 13.2%, to its employment rolls and 33.3% to its value added.

Several industries made substantial increases in their labor force. Trans-

portation equipment added 196,000 jobs, an 11.5% improvement. Machinery (except electrical) increased its payrolls by 161,000 persons, or 10.3%. Electrical machinery manufacturing employment went up 133,000, almost 14%. Jobs in primary metals rose 118,000, up 10.3%.

Without exception, all industries produced more in quantities ranging from 3% to 46% of their 1954 value added. Employment didn't follow the same pattern. Food, tobacco, textiles, lumber and wood, and miscellaneous manufactures reported fewer employees in 1957. The textile industry, squeezed by imports, employed 4.3% fewer people in 1957 and produced only 10.6% more in value added. Lumber and wood changed hardly at all—down 0.2% in jobs and up 3.1% in value added—the smallest gain reported.

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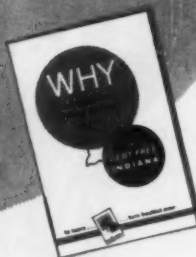
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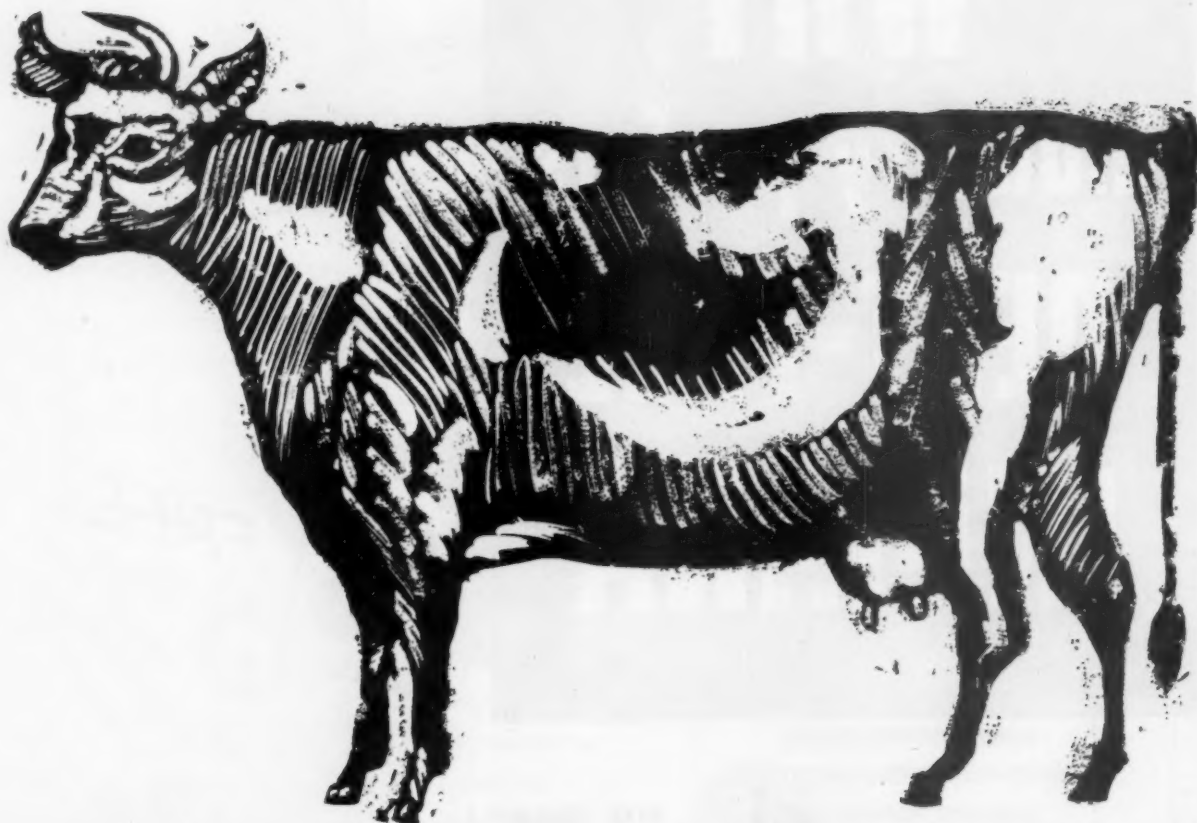
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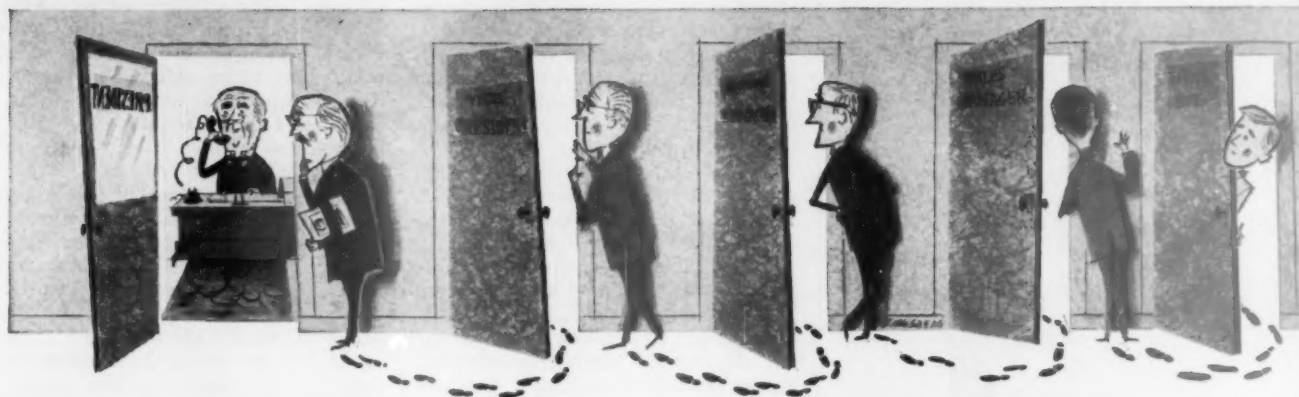
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Waiting for the Boss to Retire

Mostly, executives are pastured at 65, though some think it should be earlier, some later. For hourly workers, the trend is to let them work longer as they live longer.

The whole chain of command in the drawing above is clanking with frustration as it waits for the entrenched boss at the left to retire and let everybody move up. And the chances are that if the boss has his way, the chain will keep right on clanking.

The boss—any boss—probably feels a lot sprier than his father did at the same age. What with modern medicine and diet, he is a lot sprier, and the chances are that he will cling to the executive throne even when he reaches the rather generally accepted retirement age of 65.

The boss won't want to step down, and his company is likely to have its doubts, too. The company wants no part of the ill will that can blow up if it just boots the head man out. Neither does it want to be wholly severed from his experience and contacts. And it's quite conscious that no absolute deadline—be it 65 or any other age—can be applied with precision to all men. Maybe the aging boss is old before his time; and maybe, he'll be a tower of strength and energy way into his 70s.

• **Yen to Rise**—While the boss growls, and the directors scratch their heads, all the rest of the company hierarchy knows exactly what it wants: It wants the boss to get out and make room for some promotions. The brighter young men are very likely to walk out if they can't move up.

Supporting these legitimate, if hard-boiled, aspirations is a long tradition of social thinking. The reformers have cheered at every step, from the time when a man retired when he fell down and couldn't get up, to retirement at 70, to the Social Security limit of 65, to the modern "permissive" and pre-

mature retirement ages of 55 or 60.

The ambitious and the socially conscious have found support in the same modern technical progress that has made the boss feel so full of vim. Technology and business concepts are changing just as fast as medicine and diet, and the aging boss, probably oriented toward the past, has an increasingly hard time adjusting.

• **Counter Trend**—For a good many years, the retirement age has tended to creep lower. But lately, a counter trend has started, with attacks on any arbitrary and compulsory retirement age.

Just last winter, Dr. Gunnar Gunderson, president of the American Medical Assn., deplored programs that make men stop work at an "arbitrary" age. Health, Education, & Welfare Secy. Arthur S. Flemming called compulsory retirement "a lazy man's device for dealing with a difficult problem."

A voice from industry has joined the chorus. A. E. Williams, former vice-president of Fruehauf Trailer Co., says "compulsory retirement has abruptly terminated the careers of many capable men. Barring physical handicaps or illness, there is no reason to believe that when a man reaches 65 he suddenly loses his faculties, the store of knowledge he has accumulated over the years, or his ability to work."

To gauge the strength of the counter trend toward later retirement, BUSINESS WEEK reporters took a nationwide sampling of companies. Generally, the survey showed that mandatory retirement programs were even wider spread than in 1955, when the National Industrial Conference Board found that more than half of 327 companies ques-

tioned had compulsory programs, the majority at age 65. The move for a later cut-off was drawing unexpectedly few recruits, though a handful, including Campbell Soup Co., had moved the age limit back to 68. Sheraton Corp. of America reversed the process, changing to 67 from 69.

I. Mistrust of Flexibility

A flexible policy might seem to be the answer, at least for the brass, but companies on the whole regard elasticity with great alarm, frequently because of shuddery remembrance of pre-program troubles. Sun Life Assurance Co. of Canada says it lost almost all its restless younger executives as the top men stayed on and on. A U.S. insurance company recalls its work-as-you-like days: One department ended up with a 96-year-old boss, whose heir apparent was 75.

Many companies with no such haunting memories still dread entrenchment at the top. Says a utility executive: "Turnover in this industry is so slight that without a compulsory program to create managerial openings there would never be any room at the top." A steelman echoed the sentiment: "We've just got to have more and more young men with new ideas, all the way down the ladder. There has to be room along the line to move the younger men." In the corporate pyramid, one opening at the top can encourage a lot of men near the bottom.

• **Everyone But . . .**—A camouflaged flexibility has been achieved by some companies, which keep a mandatory rule on the books but allow a few exceptions—usually at the extreme top. A large food chain retires all executives at 65, except its two top men. A furniture maker has allowed only two exceptions in the 12 years of its plan, both were at the top. A nationwide service or-

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ganization with headquarters in Atlanta sternly retires all workers at 65—except the top boss, who is well over the limit.

One way to sugar the retirement pill and retain a man's value, too, is to hire him back as a consultant. This does make an opening for a younger man, but the expedient has sharp limits: "After all, how many consultants do you need?" a Pittsburgh executive asked. A Chicago meatpacker doubted it ever called on its "consultants."

• **Useful**—Sometimes the consultants prove to be powerhouses. San Francisco's American Trust Co. found spots for two retired executives—one is its top man on mortgages, the other on lumber and commodities. At Clary Corp., the personnel manager is enthusiastic, "The knowledge and contacts of these older executives have made them well worth their salaries. One successful invention or contract negotiated would pay their salaries for 20 years."

A variant on the consultant gimmick is stepdown retirement, in which an executive works fewer and fewer months per year—with a proportionate cut in pay and responsibilities—for a few years before absolute retirement (BW—May9 '53,p72; May29'54,p70).

II. Further Down the Ladder

From a company's point of view, keeping an aging production-line worker on the job does not present the possibility of stifled initiative that an executive could create. A good many outfits as a result have quite separate retirement policies for executives and workers. Campbell Soup, pasturing its executives at 68, lets non-supervisory workers stay on till 70. Inland Steel Co. retires executives at 65, sets no age limit for hourly workers; Raytheon Mfg. Co. retires salaried personnel at 65, lets plant workers stay on till 68.

A national insurance company tries a switch: Workers can stay on till 68, if they promise to work the full three years after the 65 executive limit.

• **Pension Peril**—The pension experts of many companies, casting apprehensive eyes on the ever-lengthening life expectancy of mankind shown in the insurance tables, take a bright view of extending the worker's active years. In 1941, life insurance tables gave a 60-year-old man 144 more years to live; current tables stretch that to 16 years.

Obviously, this raises the question of whether a pension plan worked out a few years ago will be able to carry the burden of payments for the added year and a half. Shell Oil Co. apparently thinks not. It offers workers a premium pension if they'll stay on to age 65, well past the company's "normal" limit of 60. The 60 limit still holds for Shell's 200-odd top executives.

A lot of companies seem to agree: Dun & Bradstreet surveyed presidents of 162 companies, found that more than half thought that retirement time would have to be deferred in the future, perhaps by as much as 10 years.

• **Unions Object**—In quite a few cases, the workers themselves are pulling in exactly the opposite direction. A big Chicago company says its union has argued for earlier retirement; Detroit expects Walter Reuther's United Auto Workers to pressure Washington for earlier retirement under Social Security. In Pittsburgh, young steelworkers grumbled when seniors bumped them out of jobs. At one plant, an organized demonstration called on older workers to retire. The Associated Industries of Cleveland found a growing number of its members studying earlier retirement.

During the recession, early retirement was used to cut work forces without firings. Humble Oil & Refining Co. started early retirement a year ago (BW—Feb.15'58,p44), but has since stopped the wheels until another worker surplus develops. A Pittsburgh company cleared out top level deadwood the same way; a big meatpacker slashed its office force from 1,250 to 750 by "requesting" retirements.

• **"Demoralizing"**—For the future, there's considerable sentiment for allowing much greater flexibility in the retirement of hourly workers. The industrial relations director of a major oil company thinks the programs of tomorrow will offer permissive retirement at a reduced pension at 55 or 60, normal retirement at 65, and mandatory retirement at 70. Other companies see no need for any set limit for the hourly workers; one calls it "demoralizing and unnecessary." With a whole batch of alternatives, the worker will be able to fit his retirement to his social, emotional, and financial needs.

For their executives, though, few companies like any such flexibility. Mostly, they want men of 65 to let go of important control. Some retired executives agree; said one of them: "I was not ready to retire, but it was good for the company. Holdovers upset the routine of executive development and tend to slow down the comers."

Tom P. Walker, retired chairman of Transcontinental Gas Pipe Line Corp., elaborated on this view. "I have convinced myself that 65 is about as good a date as can be found, even though I am certain that I am one of the favored ones who still has useful years ahead. But five years from now I am sure that I would feel an even greater urge to continue. As each year rolled by, my resolve would become more firmly fixed until finally it would take a charge of dynamite to blast me out. . . . How much more dignified to quit while one is ahead." **END**



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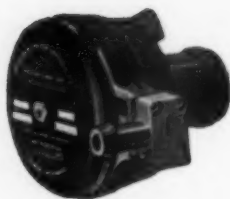
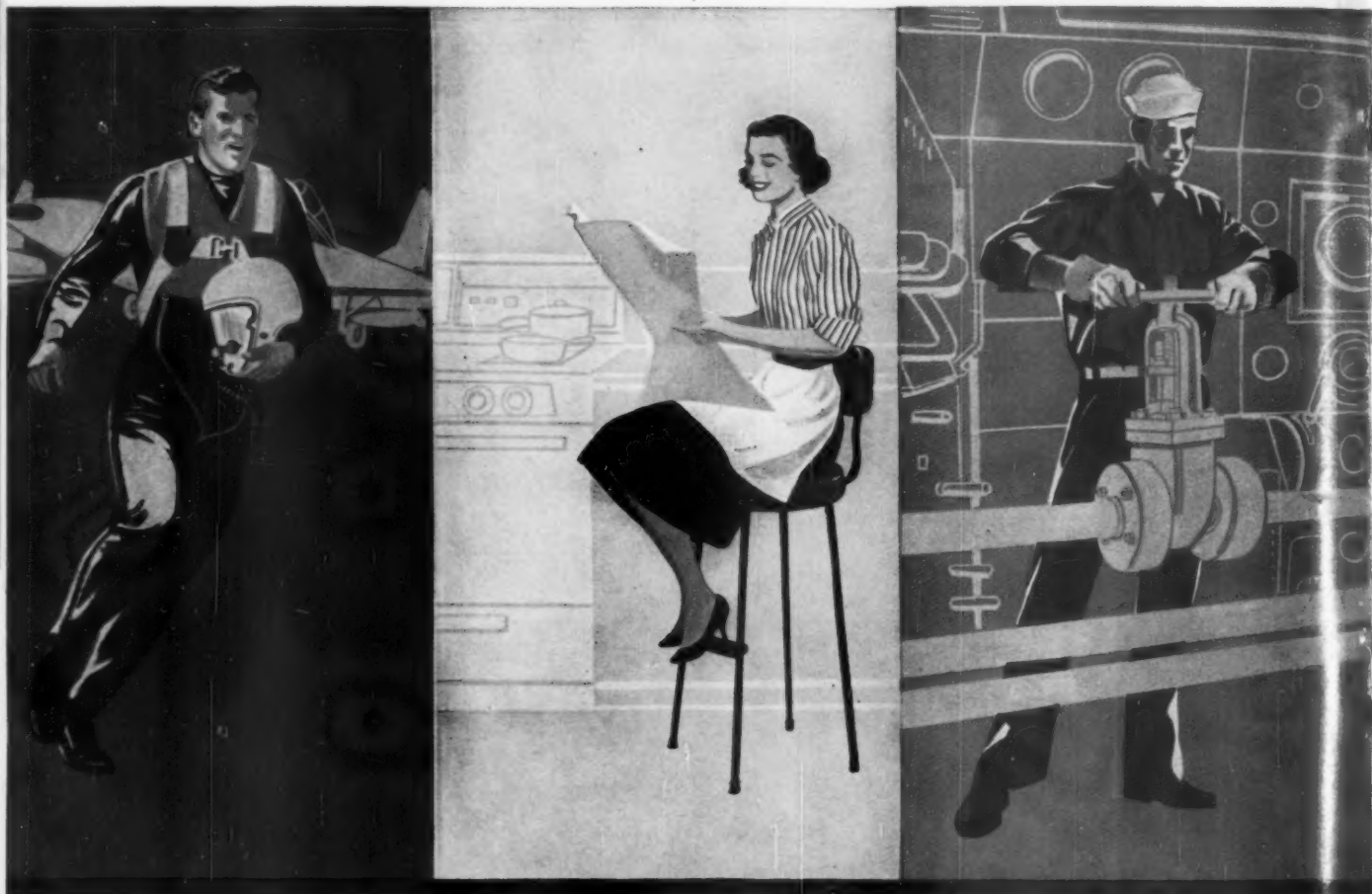
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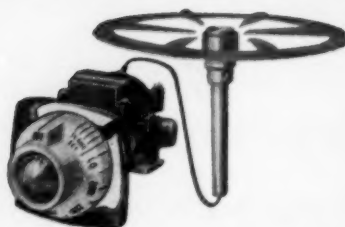
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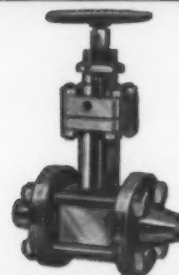
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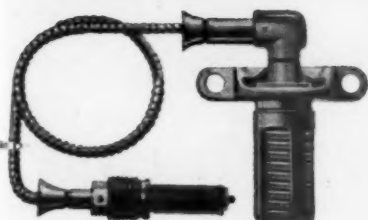
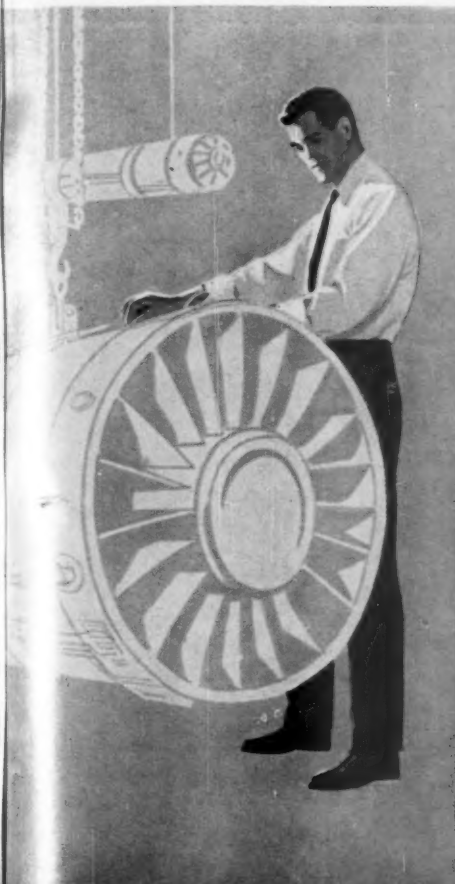
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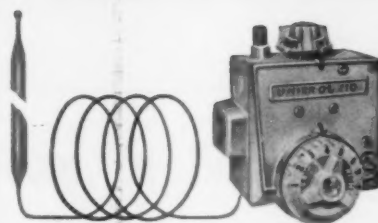
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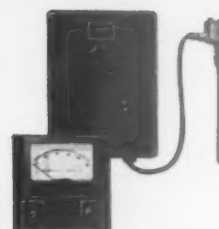
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In Management

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Decisions Come Quicker at U. S. Rubber

Since Abolition of Committee Rule

U.S. Rubber Co. says its abandonment of committee management (BW—Oct.19'57,p199) has improved top-level decision making. In late 1957, the company dissolved its executive committee and gave most of the responsibility to individual officers. Last week, in an address to the New York Society of Security Analysts, Chmn. H. E. Humphreys, Jr., gave the new organization plan credit for speeding U.S. Rubber's recovery from the recession.

The change was made, Humphreys explained, because committee decisions took too long, often represented compromises rather than selection of the best alternatives. Staff work and information gathering have not been reduced, but now each executive is forced to be more self-reliant. "We are getting as wise or wiser decisions," said Humphreys, "and are getting them faster."

• • •

Study Points Out Techniques

That Make the Manager—But . . .

In management techniques, the ambitious and successful executive has much in common with the unambitious and unsuccessful management man. Both are likely to be unreceptive to new ideas, to be considerate of personal feelings of subordinates, yet strict in enforcing lines of command and organization control (stricter than they think they are).

This is the conclusion of Melvin Seeman, associate professor of sociology at Ohio State University, after study of 44 executives.

On the other hand, Seeman found, the characteristics of receptivity to suggestions for change and of loose organizational control are shared by (1) executives who are ambitious but so far unsuccessful and (2) those who have won repeated promotions without really trying.

• • •

The Smaller Colleges Bank Together

To Seek Funds From Corporations

Some 500 small and medium-sized U.S. private colleges have banded together to knock on the doors of big national companies in search of funds. All kinds of colleges hit all kinds of corporations to raise the estimated \$136.5-million that business gave to education last year. Until now, however, most of the fund-raising at the large multi-plant companies has been done by the major private universities or on their behalf (BW—Sep. 13'58,p78).

The smaller colleges had formed regional associations that made joint appeals to local companies, splitting up part of their receipts equally among all member

colleges and the rest on the basis of enrollment. Last year these 40 associations raised almost \$8-million. Now they are extending their operations through the formation of the Independent College Funds of America, Inc. The new organization will take the small school's appeal to the big companies, distribute gifts to the state associations that the donor designates. (It's currently divvying up one big gift among all members of the Assn. of American Colleges, even though many aren't members of the regional associations.)

Half of ICFA's \$70,000 first-year operating budget comes from the 40 regional groups, the other half from the Alfred P. Sloan Foundation Inc., and five business organizations: College Life Insurance Co. of America, General Electric Co., General Foods Corp., Union Carbide Corp., and United States Steel Corp.

• • •

Management Briefs

American-Hawaiian Steamship Co. plans to get back into the shipping business. The company sold the last of its ocean-going ships in 1956, since then has derived its income from a \$15-million portfolio of securities (BW—Mar.29'58,p125). Now the company plans to build ships to carry loaded trailers, but to quiet the demand from some stockholders for a distribution of assets instead, is offering to buy up its own stock at \$105 a share, about \$10 above market price at the time of the offering.

The Alexander Hamilton Institute, polling 400 of its middle-management students, finds that 57% think that team play gets them ahead in their companies faster than individual initiative, and that two-thirds would have it that way if they were setting policy. Just over half say they would rather have a secure position with slow advancement than a less secure position with chances for more rapid advancement.

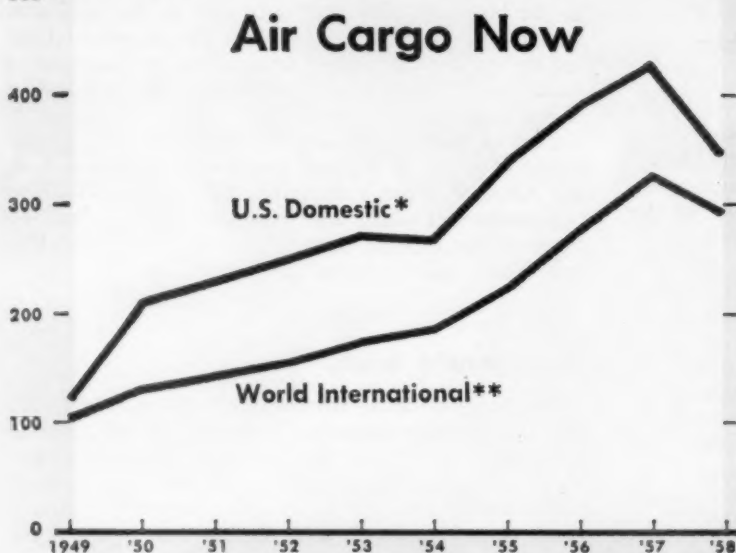
An organization to improve cooperation between the business community and the schools has just been formed by 80 New York City businesses. The Business Education Council of New York, Inc., will sponsor committees of businessmen and teachers to work in such areas as vocational guidance, high school and elementary science, adult education, and economic, commercial and vocational education. The new council is the first, it says, to operate in such a broad area; similar groups in other cities have tended to specialize.

M. Lowenstein & Sons, Inc., big textile manufacturer, has realigned its top management, but Leon Lowenstein, 75, remains chief executive officer. Lowenstein takes the new title of Executive Chairman, as Donald B. Tansill, 62, moves up from the presidency to Lowenstein's old spot as chairman. From lower on the corporate ladder, Everett C. Drake, 41, was stepped up to president.

List Industries Corp. is trying again to merge with Glen Alden Corp., the coal-mining-and-air-conditioning company in which it has a 39% interest. Glen Alden would be the surviving company in the new deal, but List owners would hold 79% of the stock. The companies' attempt to combine a year ago was blocked by stockholder action in the courts (BW—May17'58,p101).

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For the 60s some predictions:

"Within the next 10 years, airline revenue from cargo will equal if not surpass passenger revenues."

Willis G. Lipscomb, vice president, Traffic and Sales, Pan American Airways

"5-billion ton miles by 1965."

Donald W. Douglas, Jr., president, Douglas Aircraft Co.

"Inevitable that some day air transport will move more cargo than passengers."

Raymond A. Norden, president, Seaboard & Western Airlines.

Air Freight Gets a Hard Sell

For years, the airline industry has been just the opposite of the railroads—it has made its money on passengers, carried freight only as an incidental. Air cargo has never accounted for more than 10% to 12% of the industry's total revenues.

But now that the airlines have become mass transportation for passengers, they are readying themselves to move freight massively, too, in direct competition with rails, trucks, and shipping. They have two principal reasons:

- They are encouraged by the way volume of cargo business has risen except for a mild recession-caused downturn (chart). The trend is now upward.

- They need increased revenues to pay for the expensive jet and jet-prop planes coming along.

- **Cost Woes**—In the past, the airlines' efforts to build cargo business withered under operating costs so high it was impossible to compete with surface carriers except when the need for speed made customers willing to pay premium rates. Direct operating costs of a cargo plane ran to 10¢ per ton-mile and more, compared with surface costs of 2¢ to 4¢ and sometimes even less. The trouble was, for one thing, that cargo planes were simply hand-me-downs from the

passenger trade—with side doors, that made loading awkward and slow.

This time, the industry thinks things will be different. A number of aircraft makers are offering planes designed specifically for cargo, with capacious doors at front or rear of fuselage and sometimes both. They may be the answer to air cargo executives' dreams of a freighter that will operate at a direct cost of less than 5¢ per ton-mile. Besides their operating economies, the new planes will boast adaptability to money-saving ground operations.

Some airlines have already moved. For example, in Miami last week Riddle Airlines, second largest of the three domestic all-cargo carriers, became first in the industry to order a jet-prop freighter. It plans to buy four British-made Argosies, four-engine planes with front and end loading doors. The manufacturer, Armstrong Whitworth Aircraft Ltd., claims efficient loading and jet-prop speed will give the Argosy such "quick turn-around capabilities" that one plane will do the work of three C-46s, the type of piston plane Riddle now flies. On a ton-mile basis, Riddle expects direct operating costs to drop 30% with the Argosies.

- **Mobilizing**—Especially among the

trunk airlines and major overseas carriers, the plans for freight are far-reaching. Executives are busy looking over the new planes, shaking up and expanding freight sales forces, and establishing new offices to solicit cargoes.

Pan American World Airways, for one, is contemplating a major spending program for air freighters, including jets and jet-props. In the last two years, Pan Am has doubled the number of man-hours devoted to selling cargo, and it plans to add even more cargo-only salesmen. Seaboard & Western Airlines, a U.S.-bound transatlantic cargo carrier, has opened a half dozen freight-soliciting offices in the West and Midwest. Seaboard has also devised a system to package such hard-to-stow items as furniture at the airport. This drastically reduces loading time.

- **American's Way**—Some of the quickest stepping has been by American Airlines, which logged 95-million ton-miles of freight in 1958, compared with 54.6-million in 1953, only five years ago.

Only two weeks ago, American announced it would convert 10 Douglas DC-7s from passenger to freight use at a cost of \$44-million. The DC-7s, replaced by jets on passenger runs, will

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If you're putting steel in inventory because you think it's a bargain, compare *all* of your *costs of possession* with the cost and *freedom-from-risk* of buying from your Steel Service Center. Use this chart. Or, to be more precise, get the booklet *What's Your Real Cost of Possession for Steel?* from your convenient Steel Service Center. American Steel Warehouse Association, Inc., 540 Terminal Tower, Cleveland 13, Ohio.

•	COST OF POSSESSION	
•	FOR STEEL IN YOUR INVENTORY	
•	Per ton delivered	_____
•	Cost of capital:	
•	Inventory	_____
•	Space	_____
•	Equipment	_____
•	Cost of operation:	
•	Space	_____
•	Materials handling	_____
•	Cutting & burning	_____
•	Scrap & wastage	_____
•	Obsolescence	_____
•	Insurance	_____
•	Taxes	_____
•	TOTAL	_____
•	COST OF FREEDOM-FROM-RISK STEEL	
•	FROM YOUR STEEL SERVICE CENTER	
•	Per ton, cut-to-size, and delivered	
•	TOTAL	_____



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TAIL SECTION swings open for easy loading and unloading of freight version of Canadair's CL-44, as shown in a model. Present cargo planes have awkward side-loading.

serve as "interim" freighters until the company acquires jet-prop cargo planes. They are needed because of American's mounting volume of freight.

American attributes the increase to the hard sell it has been giving air freight for two years now. It began by elevating the cargo department to equal status with the passenger department and putting a vice-president at the helm. Then it moved in on confirmed surface shippers with its "consulting service." With case histories prepared from market analyses, salesmen showed industrialists how profits could be increased by eliminating branch warehouses across the country and letting the airlines handle distribution from a central warehouse or from the plant. A New England key maker, for example, boosted profits by doing away with warehousing in the Midwest and shipping directly by air. Another East Coast manufacturer was shown how to save money by using air freight from his plant to Salt Lake City, instead of shipping by surface to a public warehouse in San Francisco and then relaying the goods back to Salt Lake.

• **Sales Resistance**—Of course, there's some resistance to this pitch, much of it from companies reluctant to rely so heavily on the airlines for distribution and thus abandon the degree of control warehousing provides. Others argue that "profits are already good," and still others can't determine whether using air freight would actually increase their gravy because they don't isolate distribution costs. But the airlines think that when the new low-cost freighters become common, more competitive rates will help induce the holdouts.

Some moves to reduce rates are already under way. The 87 members of the rate-fixing International Air Transport Assn., representing just about all the world's airlines, recently agreed to "develop the cargo market" with special low rates across the North Atlantic.

Some of the commodities they aim to attract: farm machinery, chemicals, and office machinery.

Domestically, there's no plan to lower air cargo rates. Air cargo men intend instead "to hold the line and let surface rates pass us by"—which they think will happen eventually if the present surface cost trend persists.

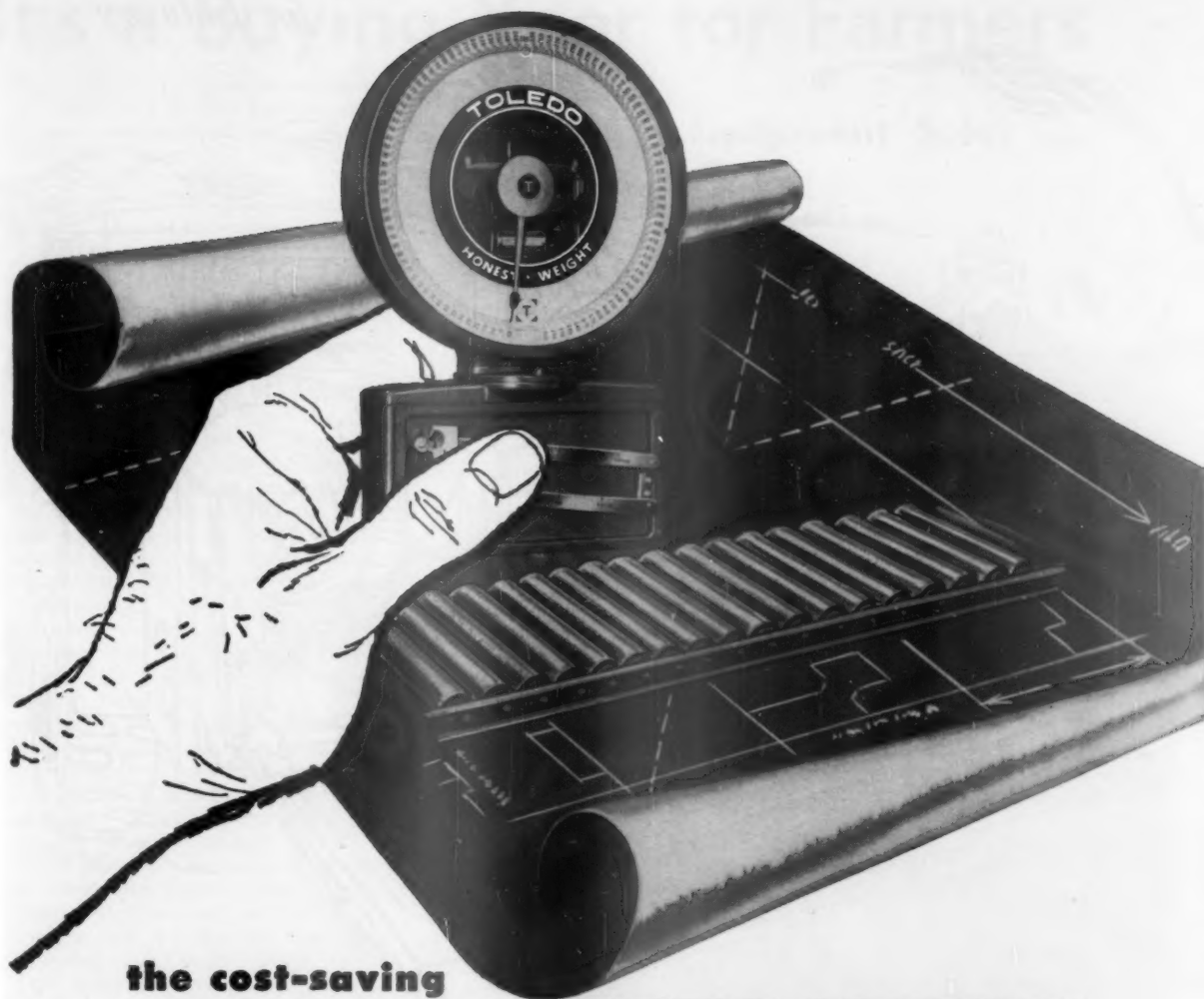
• **Inspiration**—Much of the stimulus to expand air cargo has come from aircraft builders, who would like to sell freight planes to fill order books being emptied by passenger jet deliveries.

Lockheed Aircraft Corp. is offering a long-range version of the Hercules 130, a turboprop end loader already in use by the armed forces as a "flying warehouse." Canadair Div. of General Dynamics Corp. plans to produce the CL-44, a jet-prop cargo ship with a tail section that swings on hinges to open the end of the fuselage for loading (picture, above). Models of the plane without the swing tail are already flying. Convair Div. of General Dynamics would like to produce a swing-tail version of its 600 passenger jet.

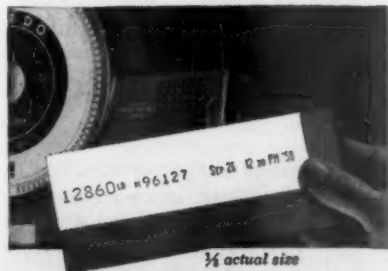
Other builders, here and abroad, are developing "true freighters," too.

• **Ground Speed**—With such planes so close, the air cargo people are already talking about ways to streamline operations on the ground, including "preloading" of a plane. In one technique, the cargo would be arranged at the airport on wheeled pallets in just the way it was to ride in the plane. When the cargo liner landed, the preloaded pallets, strung into a train, would be pushed up a mobile ramp into the plane and locked into place.

With up-to-the-minute methods such as this, muses one airline executive, "we could probably compete for a lot of the stock freight business the railroads and the trucks and the ships have now." Some cargo brass even dream of airline freight revenues someday outstripping passenger revenues. **END**



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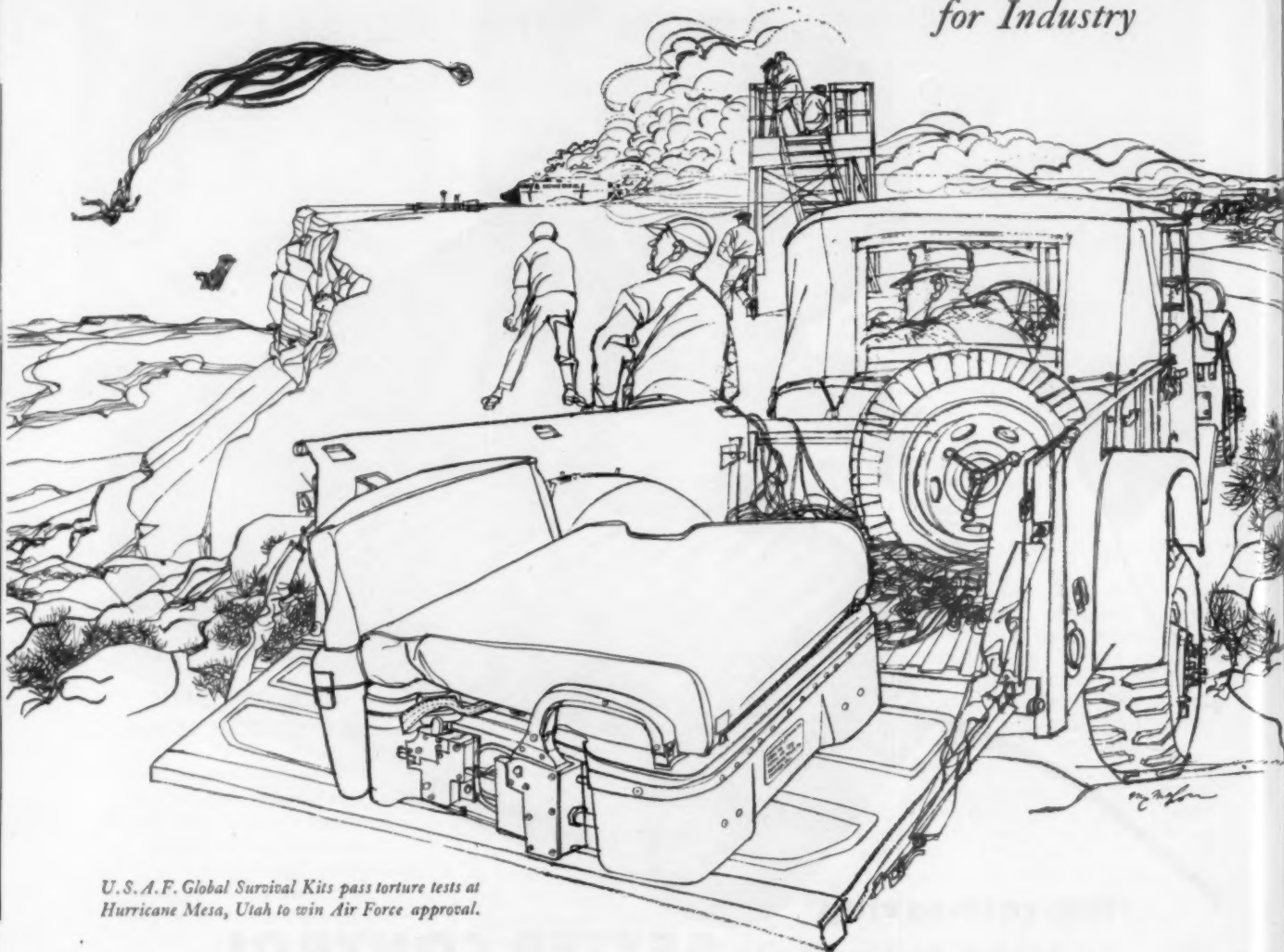
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TRADE MARK

It's a Buying Year for Farmers

Spurred by the prospects of increased farm income and bumper harvests, the farm equipment industry this week is pushing full steam into the second quarter of its fiscal year.

Production and assembly lines are humming. Most of the output is going to dealers in anticipation of the spring buying season. Farmers are buying, and there are signs that the boomlet will extend through the first half of 1959 and perhaps longer—depending again on farm income and good crops.

International Harvester Co. reports that the only limiting factor on its farm tractor and equipment output is the capacity of its production facilities. "Our problem is building and shipping it fast enough," a spokesman says. I-H, which was strike-bound for 43 of 61 scheduled production days in the first quarter starting Nov. 1, expects a 10% increase over 1958 in the sale of farm equipment.

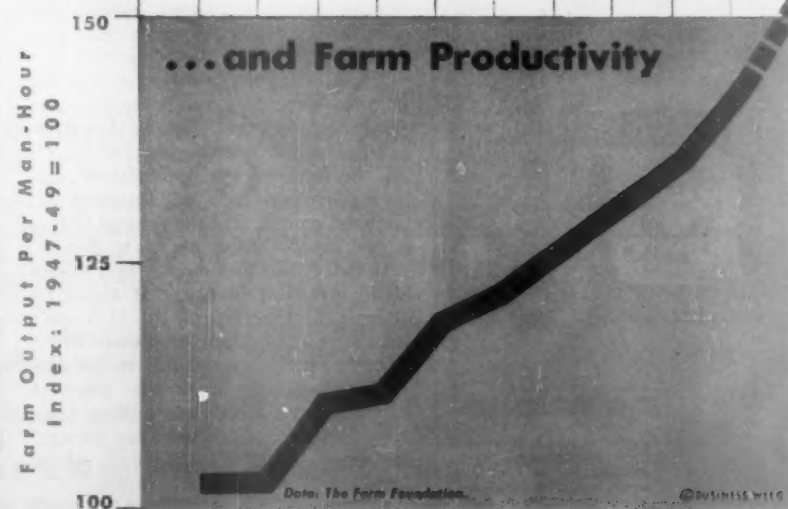
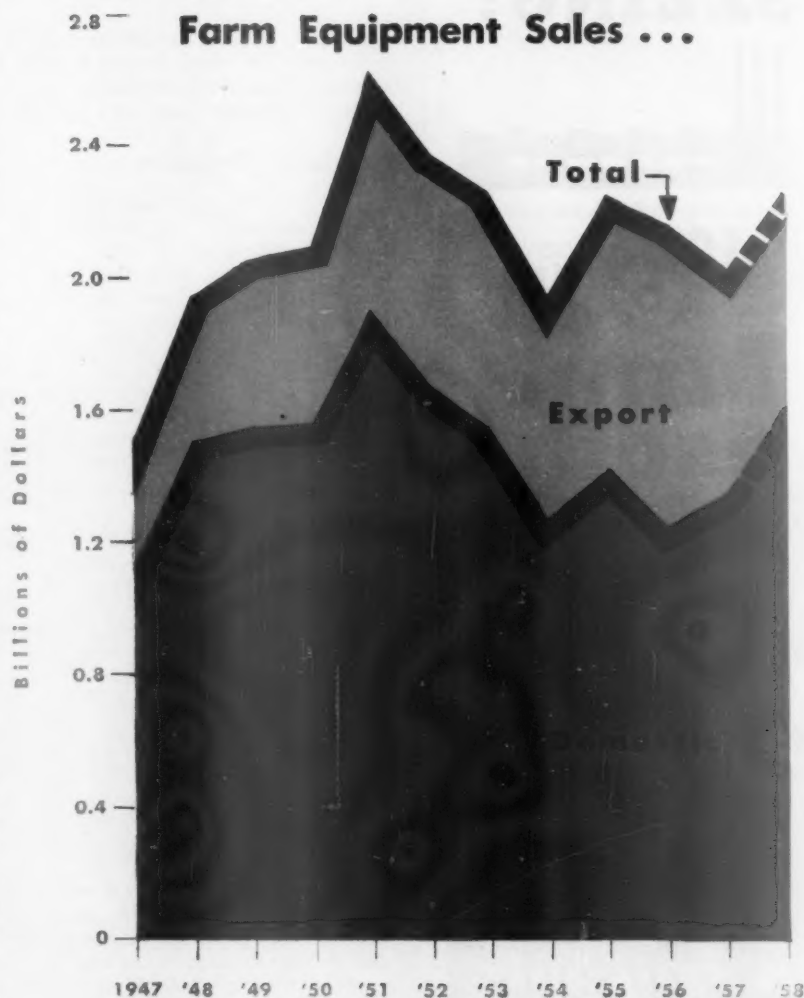
Farmers, says I-H, have more cash, and prospects for the year are good. Machinery turned out in the late 1940s is nearing its life expectancy. Besides, farmers need high-power tractors for larger acreages. Massey-Ferguson, Inc., which says the biggest sales period was in the early 1950s, expects a big replacement boom in the early 1960s.

• **Optimism**—The chance of a drop in farm commodity prices doesn't worry International Harvester, which thinks if there is one it will come after the peak selling season in the spring.

This opinion is echoed by Chmn. Alva Phelps of Oliver Corp., which earned an estimated net of \$306,000 in January and \$199,000 for the first quarter ended Jan. 31. This latter figure compares with a loss of \$771,000 for the first three months of fiscal 1958. Phelps predicts that sales in 1959 will run 15% to 20% ahead of 1958.

"It's getting easier to sell," says Phelps, "particularly to poorly mechanized farms. They're buying machinery for a particular job." And he adds that financing is easier. "The country banks are looking for farmer loans more and more. Marginal farmers are fast fading from the picture; you can't operate a farm today on less than a \$50,000 capital investment."

• **Seasonal**—Like automobiles, farm machinery is seasonal. Business was off in the first four months of fiscal 1958, but late in February a year ago it began to move, and the last eight months brought a solid increase. This year, it looks as though the industry is getting a head start. And there is evidence that the industry is overcoming some of its seasonal aspects. While 60% of all sales are still in the spring, fall sales are



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PPCO 1959

" . . . but exports are off sharply, and there are indications that the downturn in these could be a drop rather than a dip . . ."

STORY starts on p. 109

now "nearly as good," according to one spokesman. The three harvest months of June, July, and August are the only months when implements can't be sold.

I. Delayed Reaction

There are other signs that the industry can continue to lift itself out of the slump that it hit in 1956. Economists have noted that the farmer doesn't rush to buy new machinery as soon as he has the money for it. Buying reactions lag a little behind income. Now, in the Corn Belt, country banks report more time and demand deposits—a hint of continued though careful buying in the spring season.

- **Sales Curve**—But the farmer hasn't been sitting on his wallet. Estimates are that 1958 shipments by farm machinery and equipment makers (chart, page 109) will be in the neighborhood of \$24-billion, which, though far from 1951's record of over \$2.6-billion—when mechanization was building up following World War II—will still exceed the previous year's \$2-billion-plus.

Dollar value of total shipments for the first nine months of calendar 1958 was 19.6% greater than the same three quarters in 1957, and the fourth-quarter figures reflect the upward trend.

However, there is some question whether 1959 will top 1958. Some forecasters expect a decline toward year-end in the gross and net incomes of farm operators. They point out that of more than 4-million farms in the nation, only about 130,000 gross \$25,000 or over.

The strong market in used farm machinery indicates careful buying, but experts feel that farm equipment generally should have a good year.

- **Cloud**—One shadow hovers over the picture. Exports are off sharply, and there are indications that the downturn in these could be a drop, rather than a dip. References to the difficulty of competing overseas crop up repeatedly in financial reports, and the general feeling is that exports will continue to decline.

A spokesman for one Midwest manufacturer puts it bluntly: "If exporting of farm machinery from the U.S. isn't dead already, it's on its deathbed. Price-wise, it's nearly impossible to build it here and ship it there any more at anything even faintly resembling competitive prices." He is speaking, he says, of "every place but Canada," where costs are "about as much as ours."

- **Operations Abroad**—Meanwhile, the trend toward manufacture abroad in-

creased steadily after World War II, and has picked up even more momentum since Korea.

Deere & Co., for one, is studying the advantages of establishing manufacturing operations "in several foreign areas" where it has been hardest to sell products made in its U.S. and Canadian factories. Diversified Allis-Chalmers Mfg. Co. reports a downturn in export sales in 1958, "reflecting America's continuing problem of pricing itself out of world markets, lack of dollar exchange, and artificial trade barriers. At the same time, sales of nonconsolidated foreign manufacturing subsidiaries held up."

Except for the bolsterings from Canadian demand for tractors and farm machinery from the U.S., industry economists say, the export situation has been worsening steadily. A good Canadian market in 1955 and 1956 brought up export shipment figures. But last year, total exports were down again, from \$680-million to an estimated \$650-million, and this year are expected to drop further.

II. The Mechanized Farm

Aside from the export problem and its pressures, other trends are discernible in the manufacturing ranks. Farm equipment makers have long talked of the farm revolution—increased output on bigger farms by fewer farm workers—with their own machines, larger and more efficient year by year, playing a leading role. But now the industry itself is seeing change.

Diversification is spreading, often in the direction of light industrial machines. Manufacturers are setting up credit units to strengthen long-standing financing practices, and they're beginning to eye the area of materials handling. "Total mechanization of agriculture," says one researcher, "is a long way from either saturation or adequacy."

- **Bigger and Better**—Machines, meanwhile, continue to grow in size, power, and complexity, although industry people will tell you there's plenty of equipment for the small farmer, too. Deere & Co. has a new cotton picker designed to do the work of 25 field hands. The company claims it's the first time a picker can be economically justified on 40 acres or less of cotton.

III. The Sales Problem

"The selling of farm implements really hasn't changed in a long time," says Merritt D. Hill, general manager



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"... 'there are too few competent men who can demonstrate farm equipment'..."

STORY starts on p. 109

of the Ford Tractor & Implement Div. "There's only one way to do it—you have to demonstrate it. People just don't walk in and buy it, like they do with an automobile. This is why the industry isn't doing better."

Hill feels that the weakness in implement sales is the fact that there are "too few competent people at the retail level who can demonstrate farm equipment." And there are two obstacles that have to be overcome to get better salesmen.

"There is a need for a recruiting and training program by the entire industry in the agricultural colleges. An implement salesman or dealer must know agriculture, accounting, personnel, purchasing, advertising, and credit—as well as the complexities of tractors and implements," says Hill.

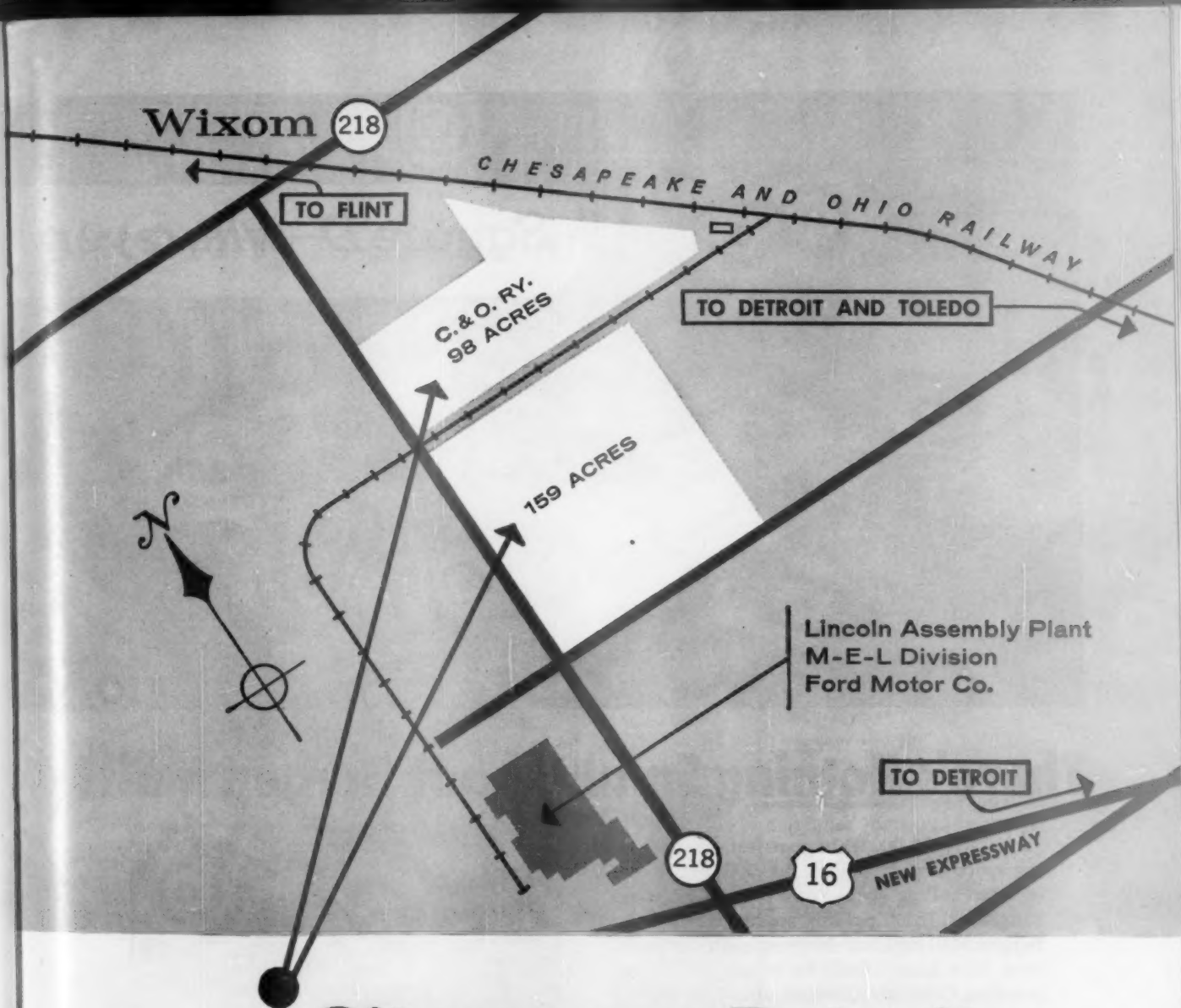
But the biggest obstacle is adequate compensation for salesmen, and this goes to the heart of farm implement retailing. "Dealers' gross on tractors should be 25%," says Hill, "but lately it's been down around 12% to 14%, because dealers are overallowing on trade-ins. This means they can't afford to pay a salesman adequately." Including parts and services, implement dealers' gross over-all is around 17%.

• **Secondhand Market**—Ironically, the used farm machinery business has been so good the past couple of years that Hill recently quipped to a Toronto group that Ford is thinking of bringing out a line of used tractors.

Raymond Koch, a Wisconsin dealer in used farm equipment, agrees that this end of the business is booming. Koch combs the Midwest and South for used machinery. At semi-monthly auctions, he sells mostly wholesale to dealers; retail business is handled six days a week.

Half his stock comes from franchised dealers who want to sell new equipment only; the rest from small farmers going out of business or enlarging their farms. The biggest market for the used equipment is the small farmer who works 200 to 300 acres. The big farmer buys new equipment almost exclusively.

• **Why**—It isn't that the big manufacturers are neglecting the smaller farmers in their designs, Koch feels, but that two raises in new machinery prices in the last nine months have done more than anything else to drive smaller farmers to the used market. In the seven years he has been in the business, Koch says, at least 100 dealers have set up to distribute used machinery. **END**



Sites near Detroit

As Detroit's industrial complex spreads ever outward, it becomes more difficult to find plant sites with all the advantages of those shown above. Only twenty-six miles from downtown Detroit, and thirty-six miles from Flint, the Wixom area can draw skilled labor from both of these industrial concentrations. And it also enjoys easy access to other manufacturing points such as Lansing, Grand Rapids and Toledo. The environment is

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JOHN GRAHAM, principal of John Graham and Company, Architect-Engineers, New York-Seattle, inspecting an early scale model of Bergen Mall, designed by his organization

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(Above) Only one main street...a proven way to generate heavy shopping traffic. The central Mall, 920 feet long, is designed to create a park-like atmosphere.



(At right) The new Stern's department store is a thing of functional beauty. 320,000 square feet on four levels—a total of more than seven acres of space. Exterior combines use of marble, red brick, rough-cut stone and large glass areas.



EC&M HEAVY INDUSTRY ELECTRICAL EQUIPMENT...NOW A PART OF THE SQUARE D LINE

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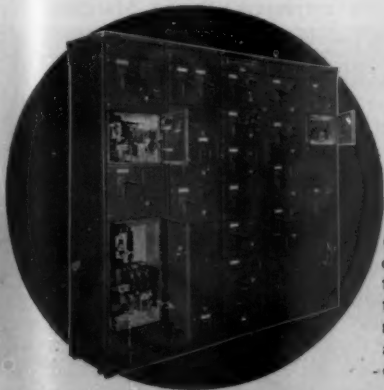
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There are hundreds of **Square D Lighting and Power Panelboards** throughout Bergen Mall. These are in kitchen area, and control lighting for the Stern dining room and power for kitchen equipment.

(At right) **Square D Feed-In Duct** runs the full length of this half-mile truck concourse, distributing power to the stores on both sides.



(At left) A **Square D Control Center** of this type provides complete control for the air-conditioning system in the Stern store. In addition, there are seven **Square D Switchboard** installations with a total combined ampere capacity of 22,500 amperes.

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LABOR

Dock Union Builds Itself a Hall



HEXAGONAL DOME, with skylight of multicolored glass 48 ft. above floor, has a clear span of 308 ft. Men gather each morning for assignment to jobs by union dispatchers.

Modernistic auditorium and office building serve as hiring hall for San Francisco longshoremen.

The union hall pictured on these pages is the fulfillment of a 25-year dream. It's the new memorial auditorium and hiring hall of San Francisco Local 10, International Longshoremen's & Warehousemen's Union (Ind.). With its adjoining office building and paved parking lot for 250 cars, it occupies a full block near picturesque Fisherman's Wharf.

The new home of the San Francisco longshoremen, with its great arches of precast concrete laced into a hexagonal dome, has been acclaimed a triumph of architecture and engineering. Less has been said about the triumph of industrial democracy that it represents.

• **Change of Tune**—Twenty-five years ago, the long-standing hostility of San Francisco stevedores and employers boiled up into a violent strike against the shape-up hiring practices on the docks. The 84-day strike was a foretaste of the bloodshed yet to come as the concept of industrial unionism ruptured the AFL and hoisted the CIO banner over a wave of sitdown strikes and picket line clashes.

A few weeks ago, San Francisco longshoremen marched up the Embarcadero again, but this time to the blare of martial music. And waiting to greet them and dedicate their new hiring hall were the governor of their state, the mayor of their city, and the president of their employers' Pacific Maritime Assn., J. Paul St. Sure.

Substitution of the hiring hall for the shape-up as a more equitable system of job distribution was, along with union recognition, the main fruit of the 1934 strike. Since then, the hiring hall has moved from one makeshift, flea-bitten site to another. Now, for the first time, it has a permanent home.

• **Using the Hall**—In the new quarters, the hiring hall doubles as an auditorium seating 2,300. From it daily are dispatched 500 to 2,500 men, or even more, to load and discharge the ships that dock at the various ports around San Francisco Bay. Local 10 has a membership of 5,000, including 535 pensioners who vote but pay no dues.

Steamship and stevedoring companies, through the PMA, share the operating costs of the hiring hall with Local 10. Object of the hall is to rotate the avail-



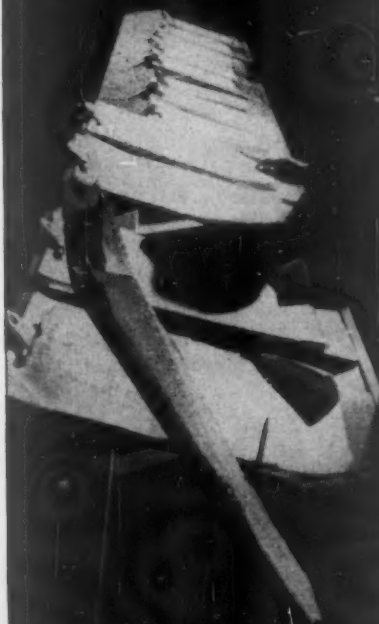
OUTSIDE VIEW shows hall and (foreground) union administration building. Square-rigged ship beyond is a floating marine museum.



BUSINESS AGENT BILL McGEE, center, listens to a beef by a member, one of 4,500 dock workers who pay dues to Local 10, ILWU.



BUSINESS WEEK • Mar. 14, 1959



SPOTLIGHTS shine on registration lists where men sign up for a chance at jobs the following day.

PENSIONERS, 535 of them, have lounge for their use, get \$100 a month, vote and pay no dues.

For what it's worth...

In case of fire, could you prove all your losses?

from the Clients' Service Bulletin of The American Appraisal Company

When buying fire and extended coverage insurance, a property owner may feel that a reasonable estimate of value is adequate. He may base his estimate on book values, general price trends, square foot and cubic foot estimates of cost, or on personal opinion, with depreciation computed merely on the basis of age. Such estimates sometimes lie dormant for months or even years, except for adding the cost of new property.

So long as nothing happens, the property owner may become complacent and develop a sense of immunity to disaster. But time does not immunize a property against fire or windstorm or explosion.

Disasters always strike suddenly and without warning. One day the plant is intact; the next day it is a wreck. Immediately the insurance policy assumes a magnified importance. If the insurance is far short of value, it is too late to increase it. Book costs, price trends, general estimates do not provide convincing evidence of value. The insurance manager now finds that he must submit a proof of loss detailing item by item the property destroyed or damaged and the value of each item. If the property records are incomplete or inaccurate, it may be impossible to prepare a satisfactory proof of loss.

Such a lack of adequate records will generally work to the disadvantage of the insured, for the adjuster cannot be expected to pay damage claims which are not properly supported. When the loss is eventually settled, many items will probably have been overlooked. The owner may receive a settlement which he

deems "satisfactory," but it may fall far short of the amount to which he was entitled and which he could have collected had he maintained complete property records and adequate insurance.

★ ★ ★

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able work through the entire registration list in the most equitable way. Since some men prefer to work in regular gangs, and others (called "plug men") do not, and since they possess varying qualifications (winch drivers, lift drivers, shovel men, hold men, dock men), the life of a dispatcher is no bed of rose petals. The lively business at the complaint window is mute testimony of his fallibility.

As orders for gangs pour in from employers, dispatchers make the rapid calculations that determine eligibility. In any given calendar quarter, the qualified man with the fewest hours worked is entitled to the first job offered. When a dispatcher flashes the hours of eligibility on an electric tote board in the auditorium, those men with fewer hours queue up at the dispatching window to receive their assignments. When this group has been exhausted, the dispatchers flash new qualifying figures until all orders are filled.

• **In the Chips**—If a man doesn't make it today, he probably will tomorrow. At a basic rate of \$2.63 an hour—\$3.94 for overtime and night work—he can average between \$6,000 and \$7,000 a year if he is a member of one of the 207 regular gangs. As a plug man, without regular gang affiliation, he can make \$8,000 to \$9,000, according to Local 10 Pres. Martin J. Callaghan, "if he's a hustler"—that is, if he seizes every opportunity to sign up for work.

Such wage rates contrast with the 95¢ an hour that prevailed until World War II, and longshoremen aren't slow to call your attention to them. To a BUSINESS WEEK reporter at a 6:30 a.m. dispatching session one of them said, with a touch of pride:

"Did you see the Cadillacs in the parking lot? Do you know that about three-fourths of these fellows own their own homes, and a lot of them, like me, own income property besides? I know one who owns five or six little apartment houses."

• **Union Not Rich**—For all that opulence, the union still had to go into hock for the \$1.4-million that went into the new headquarters. Like its parent ILWU, Local 10 is poor and pleased about it.

Echoing a remark of Harry Bridges, head of the international union and Local 10's most prominent member, Pres. Callaghan said: "We never have more cash than we need to keep the local going for a month or two." The Juneau Spruce Co. belatedly discovered that policy of planned poverty a few years ago when it got a fat judgment against the ILWU and found the cupboard as bare as Mother Hubbard's (BW—Feb. 6 '54, p113).

• **Financing**—To finance the hall, the union voted an assessment of \$252 per

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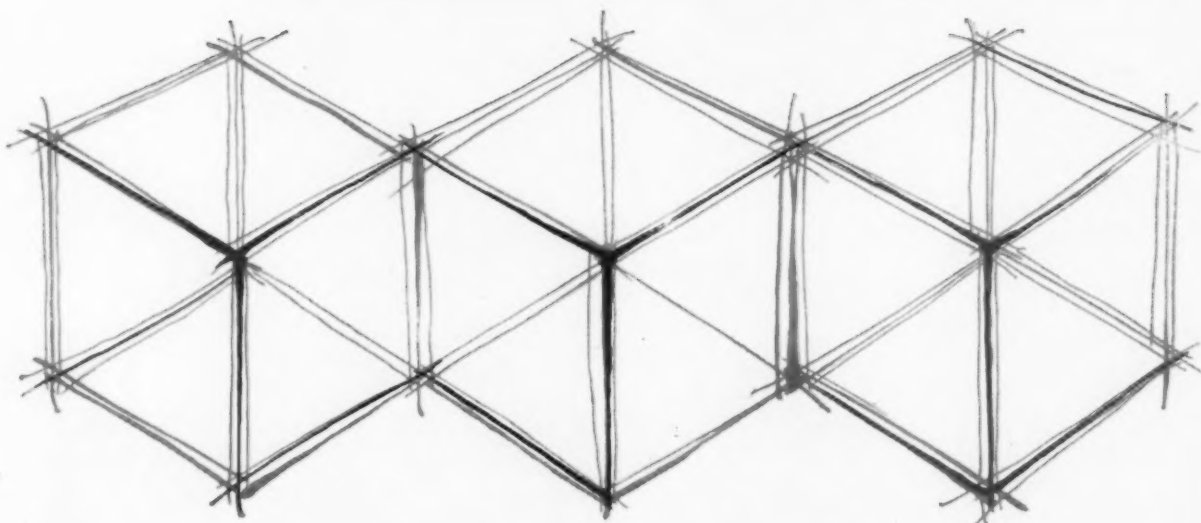
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man, payable \$3 a month for seven years, in addition to their \$6 monthly dues. Some paid the assessment in a lump, others are well ahead of schedule, but most are paying it out of income as they pay their dues. (The union is opposed to the checkoff system of dues collection.)

One tidy piece of cash for the buildings came as an interest-free loan of \$140,000 from the ILWU's big Local 142 in Hawaii. The big slug, however, came from the joint managed ILWU-PMA pension fund, a \$21-million reservoir of high-grade corporate bonds, rail equipment trusts, and debentures yielding 3.52% on average (BW—Nov. 21 '53, p176).

To hold title to the property, Local 10 created the San Francisco Bay Area Longshoremen's Memorial Assn., with the same membership as the local union. For a loan of \$1,050,000, the association gave the pension fund a note bearing interest at 4 1/2%.

Proceeds from the \$3 monthly assessment payments are committed to retirement of the loan. Should the mortgage payments become delinquent, the pension fund also has a first lien on rentals collected for use of the auditorium, including the joint payments for the hiring hall.

• **Waiting List**—For the first time in 12 years, Local 10 is due for a spurt in membership. To avoid spreading the available work too thinly, the rolls were closed after a postwar influx. Last spring, in response to the clamor for admission and to employers' pleas for a bigger labor pool, the local invited membership applications from qualified men between 21 and 40. It was swamped with some 9,000 applications.

In a preliminary screening for physical fitness and experience, the field was narrowed to 900.

Last week, a joint committee of employers and union representatives began interviews with the 900 for further tests of their capability. The men also face rigid comprehensive physical examinations in the next couple of weeks. Survivors probably will be eligible for dispatch after May 1.

Men on the "B" list will enjoy limited registration privileges in the hiring hall. By paying a prorata share of the hiring hall costs, but not union dues, they'll be entitled to job assignments after the dispatchers have exhausted the supply of fully registered men. As attrition creates vacancies in the union, new members will be drawn from the "B" list, and they will then commence to pay dues.

Right now, all but two of the men dispatched from the hiring hall are members of Local 10. These two were expelled from the union after trial, but they retain and use their registration privileges. **END**



Automatic Elbolift truck plays a vital part in new integrated system of packaging, handling and shipping in Continental Can Company's expanded coil handling program.

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aging, handling and shipping, utilizing boxcars. It required a new kind of lift truck, capable of handling the 15,000-lb. coils on 52"-square pallets, yet able to maneuver through an 8-ft. wide door and unload 4 coils from each end of a 40-ft. boxcar.

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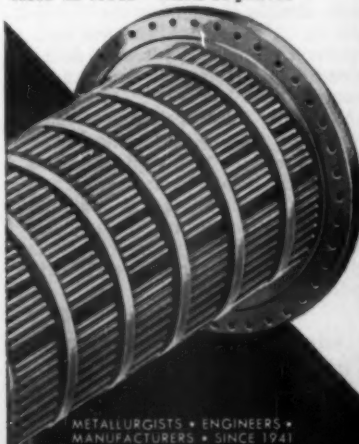
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Reform Drive Stalls

- Sen. Kennedy gives up hope of quick action.
- His proposal seeks basic reforms plus Taft-Hartley changes that labor has long sought. Administration measure would bring tougher T-H changes on boycotts, picketing.
- McClellan bill, the latest entry, would require that unions meet reform standards or lose recourse to National Labor Relations Board and tax exempt status.

Congress resigned itself this week to a long political wrangle that may, in the end, spell defeat for labor reform legislation.

The first chance for a quick anti-racketeering law was lost once and for all as Sen. John F. Kennedy (D-Mass.) reluctantly reopened his labor subcommittee's hearings on the subject.

Kennedy's timetable for bringing his union-sponsored measure to the Senate floor was thrown off by the hearing of two witnesses who favor a much tougher approach, Sen. Carl Curtis (R-Neb.) and Sen. Karl Mundt (R-S. D.). Kennedy agreed to the delay as opposition mounted to his hurry-up approach.

• **Lost Momentum**—This opposition from key members of Senate and House is cutting down the odds that Congress will pass a reform bill this year. The impetus is still there, but Kennedy's head-start has been lost.

Congress now has the three key bills that it will debate in the next few weeks. The latest comes from Sen. John L. McClellan (D-Ark.), who has been guiding the two year investigations in labor racketeering.

McClellan's bill was not greeted very enthusiastically, except by Southern Democrats including the strategic Rep. Graham Barden of South Carolina, who heads the House Labor Committee hearings on anti-racketeering. But this support could be enough to tip the scale.

Here are the bills that are the front-runners, as of now:

The Kennedy-Ervin measure. Backed by labor, this bill contains basic reform rules for unions and Taft-Hartley changes. The T-H section is arousing strong opposition from the Republicans and McClellan forces who want either no T-H changes at all or some additional amendments sought by management.

The Administration bill. This about matches the Kennedy approach on reforms, but it has stronger Taft-Hartley provisions against some boycott and picketing practices. Liberal Democrats and labor officials are fighting

this approach with considerable vigor.

The McClellan bill. This takes an entirely new approach; it would require unions to meet certain reform standards in order to be recognized by the National Labor Relations Board and to retain their tax-exempt status. Kennedy and Administration supporters object to this measure.

As the latest offering, the McClellan bill is getting the latest protests. Labor leaders flatly denounce it as union "licensing" by the government—anathema to their own legislative plans.

• **Mitchell's Stand**—Labor Secy. James P. Mitchell is equally outspoken against the McClellan measure; he calls it "reprehensible" in some of its curbs on union activities. At the same time, he plugs the Administration bill as "the fairest, best balanced, and soundest legislative approach" to labor reform—between the tough McClellan course and what he considers to be a too-soft approach by Kennedy.

If it were just a matter of one reform bill against the other, Congress might solve the matter quickly. But the inclusion of Taft-Hartley issues has provoked a first-class wrangle even among some legislative friends.

AFL-CIO Pres. George Meany has publicly backed the Kennedy bill to the hilt, going further, actually, than the Massachusetts senator wants him to. What Meany says, for AFL-CIO, is that the Kennedy-Ervin bill must pass as is—with the labor-backed Taft-Hartley amendments—or union lobbyists will try to defeat the bill (BW—Mar. 7 '59, p84).

This is not an idle threat. It's one that carries weight with a predominantly Democratic Congress, but to Kennedy, who urgently wants a Kennedy anti-racketeering law, any Taft-Hartley provision is expendable.

• **Meany Walks Off**—This conflict was evident at last week's legislative rally of the AFL-CIO Building Trades Dept. Three thousand delegates massed to lobby for the Kennedy-Ervin bill. After Meany addressed the rally, promising to back uncompromisingly the Taft-Hartley amendments long sought by



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the craft unions. Kennedy took his turn on the rostrum. He and Meany shook hands, but Meany pointedly walked off the platform before Kennedy began his address.

Kennedy told the delegates he still wants Taft-Hartley amendments in his bill, and that he considers his Title 6 suggestions "non-controversial." But, to save the reform bill, there's little doubt he'd let them go.

The Building Trades delegates, who promoted his bill in two-days visiting on Capitol Hill, came away convinced that votes can be mustered to pass Kennedy-Ervin. They tabulated Senate sentiment as 59 votes in favor of the bill, 24 doubtful or uncommitted, and 12 opposed, and they reported a "favorable" atmosphere in the House.

This could be optimistic, particularly in view of labor's stand on Taft-Hartley—or nothing.

• **Sacrifice**—As for the Mitchell and

McClellan forces, they'd be willing to eliminate Taft-Hartley chances at this point. Although the Administration measure contains boycott and picketing restrictions as well as the labor-backed T-H changes, Mitchell says it's up to Congress to decide on what to include in the reform measure. "It's the product that counts," he told Barden's House Labor Committee last week.

McClellan specifically keeps Taft-Hartley changes out of his bill. He would tackle an extensive Taft-Hartley revision later this session. Kennedy has proposed that, too. And, Mitchell seems ready to accept such a policy. All three are aware that this probably would mean no major Taft-Hartley changes this year. Most on Capitol Hill concede that it will be virtually impossible to pass T-H legislation once a labor reform bill successfully goes through.

New Threat in "Bloody" Harlan

Coal war may flare if independent mine operators decide to defy UMW and run all-out on non-union basis.

Kentucky's "bloody" Harlan County is once again strike bound. But in sharp contrast to the violent strife of the early 1930s, this week's picketing was peaceful as a United Mine Workers walk-out closed 26 Harlan County coal mines. About 3,100 of the county's 5,000 working miners were idled by the shut-down.

But the strike against the holdout independent mine operators could set the stage for a resumption of the open warfare that seared the coal county in the past if an attempt were made to reopen the mines on a non-union basis.

Up to now, only five large mines have signed the UMW agreement calling for a \$2-a-day boost in the basic rate up to \$24.25 (BW-Dec.13'58, p24). The union has rejected the plea of the other operators for a new wage plan geared to output. The small independents say that only the king-pin coal corporations can survive on UMW's terms. Cloyd McDowell, secretary of their Harlan Coal Operators Assn., says that for them to sign the contract would mean "certain bankruptcy and abandonment of the mines."

• **Tough Winter**—This has been a hard and hungry winter in the grimy valleys of southeastern Kentucky, and the operators think the miners want work, even without UMW terms. They point out that there are already 4,000 miners in the area out of work and with no hope of jobs; many have moved to work in the non-union coal strongholds of Leslie and Clay counties.

So, the operators say that the miners recognize that UMW policy is killing

the small and medium-size mines—and with them thousands of jobs. But trying to keep the mines open in the face of a UMW strike is something else again—something that could mean a real battle. So far, no one's spoiling for a fight. "We're not mad at the men and they're not mad at us," says one operator who witnessed bloodshed in the 1930s.

It's an open question whether union ties have relaxed enough for the miners to cross picket lines, even after a harsh winter and in the face of a dreary future. And the union has already deposited \$1-million in Harlan banks "to feed our boys."

• **Boycott**—In any case, non-union operation in Harlan would hinge on breaking the virtual boycott on non-union coal, which in effect is imposed by the last UMW contract (BW-Dec.13'58, p94); thus hitting independents two ways:

• Part of their market is coal sold to the big mine operators at times of peak demand.

• Coal brokers would probably join the boycott, not wishing to offend either UMW or the big operators.

Observers feel that if the small mines fail to find some other outlet for the coal they will either settle reluctantly with UMW, or else close down. But if they do find an outlet, and decide to operate non-union, the old-type fighting may break out again.

A similar impasse involving some 2,000 miners is developing in the nearby Hazard coal field where the UMW contract terminates Mar. 16. **END**

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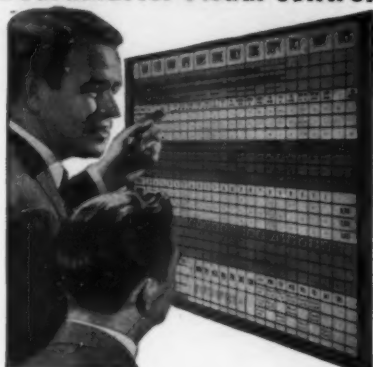
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Compensation and the Atom

Congress committee weighs need for new law to protect interest of workers injured in nuclear plants, and states may act, too. Growing use of isotopes spotlights problem.

A group of lawmakers met in Washington this week to determine whether, or to what extent, the "peaceful atom" is in danger of becoming a Frankenstein's monster to industrial workers and their employers.

The Joint Committee on Atomic Energy is hardly likely to outlaw the atom. The committee is concerned whether a special federal workmen's compensation law demanded by labor is needed. If Congress fails to act, the result could be a change in laws at the state level for all industry—whether or not there's an isotope on the premises.

• **New Hazards**—Until recently, radiation-exposed workers were found mostly in laboratories and plants dedicated to one of two programs—nuclear weapons or atomic power reactors. Workers on such projects are sensitive to the dangers and are closely supervised.

Increasingly, however, there is a different kind of "atomic worker"—one whose company uses radioisotopes such as strontium 90, cobalt 60, and cesium 137 as tools for production or for handling of goods not even faintly related to the atomic energy program. For example, practically every cigarette has its paper and tobacco measured and controlled in quality by a beta ray gauge. The Atomic Energy Commission estimates that radioisotopes already are saving U.S. industry more than \$500-million per year.

• **Complications**—Spokesmen for the AFL-CIO point out that fully half of the 500 largest industrial corporations in the U.S. are among the 1,200 already licensed to use isotopes. In addition, the employees of 2,000 nonindustrial users—including universities, hospitals, and laboratories—also are subject to workmen's compensation.

The worry is not so much that immediately disabling accidents will occur, but that workers could be overexposed over a period of time without knowing it. Virtually everyone agrees that the problem is one of the toughest ever encountered in the field of workmen's compensation. For example:

• In cases of shortened life, cancer, leukemia, and genetic mutations, it's impossible to determine whether the cause is radiation exposure or something else.

• Even the smallest amount of radiation can probably be considered harmful. The problem is deciding how much is too much.

• Actual damage may not show up for 30 years. Meanwhile, a man may have changed jobs several times. Which employer is responsible?

• Radiation has a cumulative effect.

• **More Protection**—Twenty-five years ago, the permissible occupational exposure was set at 100 rems per year. In the light of greater knowledge and increasing exposure from nonoccupational sources, the current permissible dose is five rems per year, and is expected to be set even lower eventually. But if a worker is exposed to 5.5 rems in a given year, does he have grounds for damages or compensation?

AEC points out that, to side-step legal complications, an employer often sets permissible exposures within his plant at only 25% or 50% of the permissible level.

• **States' Stand**—The unions get a lot of backing on their contention that compensation laws fall short on several counts.

Eighteen states bar compensation claims to workers whose disability occurs from one to five years after exposure. Those who change jobs and later develop radiation injury may be barred from filing a compensation claim. However, some experts contend that compensation laws of a dozen-odd states are adequate, and that no federal program is necessary.

• **Alternatives**—If Congress, as expected, fails to act now on demands for a federal program, state legislatures have proposals for action. For example, the National Assn. of Attorneys General has proposed state legislation based on standards recommended by the International Assn. of Industrial Accident Boards & Commission. The legislation would provide:

• Compulsory workmen's compensation laws, applying whether or not radiation-exposed workers are involved.

• Reciprocal arrangements among states to cover injured employees who have moved.

• Full coverage of occupational diseases, including those induced by radiation.

• Time limitations on filing of claims running from date on which employee knows the nature of his disability.

• Full medical benefits for both accidental injuries and occupational diseases, including specialized treatment and maintenance benefits during period of rehabilitation. **END**

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In Labor

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Union, Industry Differ on Wage Loss From Steelworkers' Walkout in 1956

To offset steelworkers' worries about a possible loss of money if they strike this summer, steel union spokesmen are citing figures intended to show that mill workers more than recouped their wage losses after the industry's five-week stoppage in 1956.

According to the United Steelworkers, the average man lost 200 hours of work or about \$421 in the 1956 strike. But, says USW, in the first year alone after the walkout he received \$472.80 more pay and benefits—\$51.80 more than he lost.

The industry had a quick retort: It reminded the union—and its employees—that the companies offered a 17½¢-an-hour raise without a strike. The settlement that ended the walkout added just 2½¢ an hour to what employees could have had without a strike.

At the rate of this "actual 2½¢-an-hour gain," steelworkers will have to work more than nine years of 40-hour weeks to offset their \$421 in strike-lost pay, the industry contends.

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Bill Would Require Federal Contractors To Provide Prevailing Fringe Benefits

Contractors on federal construction or repair jobs are watching bills introduced by Sen. Hubert Humphrey (D-Minn.) and Rep. James Roosevelt (D-Calif.) to broaden provisions of the Davis-Bacon Prevailing Wage Law, which applies to contract work for more than \$2,000.

The Senate and House bills would require government contractors to meet prevailing payments to health and welfare, retirement, vacation, and apprenticeship funds, as well as prevailing hourly wages. The Secretary of Labor would be required to predetermine "prevailing" contractor payments to the various funds.

Additionally, the bills would place hours of work and overtime on a prevailing basis, broaden the Davis-Bacon Act coverage, establish a Construction Appeals Board, and centralize enforcement of the act.

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Brewery Workers, Plagued by Idleness, Stresses "Share the Work" in Dickering

The United Brewery Workers is showing more interest in a "share the work" plan than in wage increases in contract negotiations with Milwaukee's five breweries. There's a reason: The union is seriously concerned about high unemployment in the industry.

The Brewery Workers wants the breweries to cut the work week to 32½ hours. In almost all major brewing

centers, contracts now call for work weeks shorter than a standard 40 hours—most of them for a 37½-hour week.

It wants longer annual vacations—five weeks after 10 years' employment—and additional paid holidays. And it's asking for a supplementary unemployment benefits program and a severance pay plan.

Another demand will be strongly resisted by employers. The union wants a provision that no new machinery will be put in operation without prior agreement by the company and union on the number of men to be used to operate it.

• • •

UAW Boasts It Has Won Raises Of 99¢ an Hour in 10 Years

Auto workers are receiving 99¢ an hour more now than 10 years ago as a result of union-negotiated wage increases—including annual improvement factor and "escalator" gains.

The United Auto Workers recently told members:

- "A real gain in living standards" has been won through 55¢ in annual-improvement-factor raises since 1948. These raises, now based on a 2½% formula, are "more than covered by increases in productivity through technological improvements."

- Another 44¢ an hour (making the total 99¢) has been added to pay under cost-of-living clauses, to "restore the buying power of wages in the face of rising prices." Of this 44¢, only 10¢ an hour can be lost if prices turn down—the remainder of the c-o-l "float" has been frozen into base pay.

• • •

Labor Briefs

Merger of the Insurance Workers of America and the Insurance Agents International Union into a single 35,000-member union is "near realization," according to a joint announcement. Boards of the two AFL-CIO unions will urge simultaneous conventions in May to ratify merger terms.

A 15¢-an-hour wage increase is being sought by the Amalgamated Clothing Workers of America from 1,400 men's wear manufacturers employing 100,000. ACWA is also asking for severance pay and other fringe gains. Contracts run to mid-1961, but can be reopened this year.

Seamen members of the National Maritime Union collected \$515,900 in NMU employment security benefits last year, double the amount in 1957. Most, 70%, went to sailors "on the beach" because of the shipping slump. In all, 7,688 received aid. The preceding year, 5,757 did.

In British Columbia, unions are protesting as "close to Fascism" a proposed law that would bar picketing except where a legal strike is going on. The measure would outlaw secondary picketing and boycotts, sympathy strikes, "blackmail" picketing, and other common labor practices.

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Rockwell hardness (R scale).....	D785-51	~15 to 106
Izod impact (ft. lb./in. notch).....	D256-43T	1.2—11.0
Heat distortion (°C.).....	D648-45T	51—70
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% moisture gain.....	D570-42	1.5—1.8
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MARKETING

Where Car Dealers Buy and Sell



RING MAN watches bidders for nod or wink signaling raised bid, presses them to go higher, telegraphs bids to platform.

Used car auctions, grown to \$1-billion-a-year business, keep market firm and set price you pay for new cars as well as used.

Spurred on by the rhythmic, staccato urging of the auctioneer, the men pictured here are setting the price you'll have to pay for a car. Every week, at more than 150 county-fair-like auto auctions across the country, these used car dealers turn over an estimated 20,000 cars.

In the short years since World War II, auto auctions have grown from nothing to a vital, \$1-billion-a-year segment of the car business. Now the auctions neatly set used car prices and provide an efficient market place for dealers—the only participants in the auctions—to buy and sell used cars.

• **Stabilizer**—Last year, the used car business, once the back-alley stepchild of many dealers, reached its greatest maturity when it maintained high volume and firm prices in the face of the sharp decline in new car business. In

fact, some new car dealers, who only five years ago were wholesaling most of their used cars, were kept out of the red in 1958 because they could make a better gross on an old car than on a new one.

Put another way, new car sales declined nearly 25% from 1957 to 1958, but according to the National Automobile Dealers Assn., used car sales by franchised dealers dipped only 8% (from 9.8-million to 9.0-million). When you consider that many new car sales were made on as narrow a margin as \$100 or \$150 gross profit with high overhead, while many used cars were bringing consistent \$150 to \$200 grosses with low overhead, you can understand why franchised dealers like the used car business today.

• **Brisk**—This week, used car dealers and managers were crowding into auctions and paying "top dollar" for "clean" cars. According to Automotive News, the average used car price at auction was \$1,116 compared to \$993 a year ago. With warm weather breaking through in many parts of the country, and factory payrolls rising, outdoor used



AUCTIONEER, who flies from auto to farm auctions in three states, chants: "Now-here's-a-nice-little-Belvedere-how-many-dollars-I-gotta-14-now-a-dime-14-15-30-a-pretty-good-30 . . ."

BIDDERS, crowding in to check engine, are all ages but mostly in late 30s; "outdoor types" prevail, but dress ranges from Ivy League to mackinaw.





BUYING is highly competitive game, and bidders pretend indifference to avoid running price too high; man on left could be signaling bid with slight move of hand.



DEALER holds his license plate ready for car he hopes to buy; many out-of-state men come to Detroit, too, for used car bargains.



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car lots are doing a brisk business well ahead of the customarily expected spring upturn.

Auctions, of course, are not the reason the used car business has been so good. Used car dealers are frank to say their customers think new cars are too expensive. But auctions and their associated price list reports have provided the business with a degree of stability and system never before reached. Auctions and strong demand may explain why used car prices failed to drop as usual last fall when new models came out.

• **Effect on New Car Price**—It used to be that the market values of used cars were set by new car dealers, through the amount they allowed on a trade-in. Now it's the auction price that tells the dealer how much he can afford to allow—and thus, through the "cash difference," how much you have to pay for a new car.

I. "How Many Dollars . . .?"

At the Aptco Auto Auction outside of Detroit, about 250 cars go on the block every Wednesday afternoon. "It's a poor day when we sell less than two-thirds of them," says manager Jack Hocking.

Aptco is medium-sized as far as auctions go. Some hold two sessions weekly, handle up to twice as many cars; others are considerably smaller. Aptco charges \$5 for each car listed, and \$10 more for each one sold. Some auctions charge as much as \$50 per car sold.

Aptco has two distinctions: It is one of two auctions in the country owned by a woman (Miss Mildred Hund, who also owns a string of quality restaurants in the Detroit area); and though founded only in 1948, it's one of the oldest in the country.

• **Fast**—Hundreds of licensed dealers (no one else is allowed to participate) crowd around the continuous line of shining, mostly late models driven past the auctioneer's platform. It's fast—roughly 45 cars per hour are auctioned.

When a car comes in, the hood and trunk are opened—a glance at the engine compartment tells the engine type, and perhaps whether the front end has been wrecked. If the spare is gone, or the windshield cracked, that knocks the price down \$25.

The seller steps up beside the auctioneer, briefly describes the car and how much he wants for it. The auctioneer begins his chant.

In a few seconds, a plateau is reached in the bidding. The auctioneer asks the owner if he'll take the highest bid. If he doesn't, but only wants a few—say \$25—dollars more, the men on the floor start chiding: "Sell the old goat. Get rid of her."

• **Telling the Trade**—Also on the auc-



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tion platform is a clerk. At Aptco, he is joined by Tom Beard, a former Chevrolet dealer general manager who makes his living by accurately and quickly reporting details of the sale to over 400 used car dealers who rely on his price list to make the sharpest deals in the following week. Most auctions sell their reports, and several publications, such as Automotive News and Automotive Market Report, an auction reporting service, publish results nationally.

The National Automobile Dealers Assn. has put out a used car price list since the early 1930s, but it was only three years ago that it added auction price averages. There are some other used car price guides, such as Galves' wholesale price list from New York, the Red Book from Chicago, and Kelley's Blue Book from Los Angeles.

Most used car men rely heavily on the local, weekly reports, since used car prices can drop over \$100 (late models) in less than a month.

II. Why Auctions?

Auctions began blooming in the years right after the war, when franchised new car dealers were making the full gross on new deals, and many quickly wholesaled their trade-ins. Dealers began flocking to sell at auctions when they found many bidders brought higher prices than the rapidly vanishing old-fashioned wholesaler.

There were other factors, too. From the seller's point of view, the auctions—through two nationwide insurance companies specializing in auction service—guarantee the buyer's check. The buyer, through the same insurance guarantee, is assured of clear title to the car. Sellers must also guarantee that the block has never cracked and the transmission and differential are good. Otherwise, the sale is voided—and a repeat offender may be black-listed from auctions.

Many dealers say point-blank that before auctions came they never knew when they'd be stuck with a bad check. And a buyer was really in trouble if he carried across a state line a car which unknown to him had been stolen or had a lien on the title.

• **Buyers and Sellers Both**—So the auctions soon became the place where franchised dealers sold unwanted (sometimes new) cars to the unfranchised lots.

Today, although most auction sellers still are franchised dealers, they also comprise most of the buyers. "Last week we sold 24 cars here," said a Detroit Chevrolet dealer at Aptco last week. "Today I'm back buying. The sunshine brought out the customers and they cleaned our lot this week."

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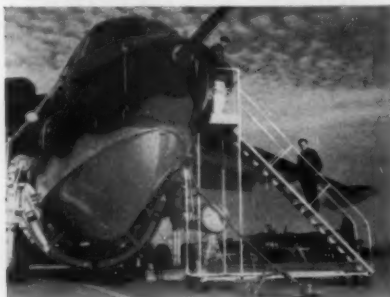


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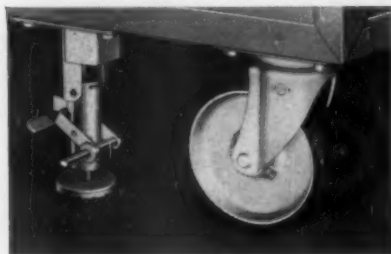
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dealer brought a '57 Olds in to sell. "I've got five others coming in this week just like it, and I want to test the market," he reported.

A Lark dealer brought a car that had been on his lot for over 30 days—and it's the rule-of-thumb that you get rid of 'em after that.

There are other reasons. Maybe a franchised dealer is up to his limit at the bank, a truckload of new cars from the factory is outside, and he needs the money fast. More often, he wants to balance the inventory on his used car lot—say, trade two Dodges for a Rambler and a Ford.

The Detroit area is a special case; its auctions tend to draw more out-of-town buyers. Since Detroiters like to drive new cars, Detroit is a relatively poor selling market for used cars; so buyers know they can get bargains.

• **Dissenters**—Many franchised dealers with strong used car departments, of course, don't like the idea of auctions, or wholesaling. They say it not only lowers prices, but puts merchandise into the hands of their competitors, the independent used car lots.

A group of Indiana franchised dealers have organized the National Automobile Marketing Cooperative Assn., and plans to start an auction in Indianapolis this month open only to members of the co-op—which is limited to franchised dealers of U.S.-made cars. Two hundred dealers have already paid a \$50 membership fee to the co-op, according to Herman Schaefer, executive vice-president of the Automobile Dealers Assn. of Indiana, and franchised dealer groups in other states are interested.

Used car men around Detroit scoff. They argue that one of the main reasons auctions were started was because dealers did not trust one another enough to do business directly, and ask how the Indiana plan can possibly have any success.

• **Auctions and Rentals**—The car rental and leasing business also depends heavily on auto auctions—and it's probably true that the two have grown side-by-side. Whether a rental or leasing company makes money or not often depends on selling the old car at precisely the right time and price.

Regular used car dealers don't like this, because a large number of year-old U-drive-its that are dumped on the market at one time depress the over-all price.

III. Warranty to Wash-Up

The used car warranty (BW-Oct. 5 '57, p. 59), which was hailed as a boon to business a year and a half ago and experienced a rocket-like success, has fallen from grace. The descent, if anything, was more abrupt than the rise. Inexperienced in the actuarial problems

involved in insuring a used car (even though carefully checked by a mechanic), warranty firms soon found themselves short of liability reserves. They had to raise rates, from \$35 to \$40 to \$45 and then to \$50. At that point, dealers finally balked—they couldn't pass quite that much along to a customer.

The crowning blow came when several state insurance commissions ruled that the warranty companies were insurance firms, and that they had to post bond and follow the insurance ground rules.

• **Appearance Counts**—Actually, say Detroit's used car experts, the warranty business was just a flash in the pan because used cars today are less of a mechanical problem. Engines that once lasted 40,000 miles without a major over-haul may go 80,000 or more now. So the big emphasis today is on appearance reconditioning.

Ford Div., for instance, put seven mobile "eye-appeal" used car clinics on the road last June, going around showing dealers how to sharpen up appearance on used cars, by cleaning up or painting. By January, Ford had 30 such clinics on tour around the country. Chrysler and General Motors have similar operations.

• **Reasons for Interest**—The reason the auto makers pay so much attention to used car sales is simple. Roughly 85% of new car deals involve trade-ins; and Ford dealers, for instance, retail something like 77% of their trade-ins. Auto makers usually figure their dealers sell three used cars for every two new cars.

But that has changed in the past year, because used car sales have been better than new. The ratio in 1958 was 1.96 used cars to every new car sale, compared with 1.63 the year before, 1.8 in 1954 (another recession year), and 1.1 in 1950. Including independent used car dealers, nearly 13-million used cars were sold last year.

And, of course, every used car buyer is a potential new car customer.

• **Outlook**—Auto makers and dealers look for the 1959 used car business to continue this strong showing. For one thing, the new car price tag law makes both dealer and customer aware of the true value of the trade-in, eliminates a bloated price made possible by a "pack."

For another, the "second car demand," which has been largely satisfied by used and imported cars, will continue until late fall, when Big Three small cars are scheduled to be introduced. At the higher levels, there is some pondering over the effect the smaller, cheaper American-made cars may have. But on the lots and at the auctions, the reaction is simply: "So, the prices will drop a little—that's nothing new." **END**



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THE MARKETING PATTERN

Looking at Costs in the Round

THERE IS A MORAL to the story of the airlines' attempts to sell air freight to U.S. business on page 104. It isn't obvious, though, so it takes some explaining.

Just about every businessman today will agree that a company has to be marketing-minded. He has been pounded by phrases: total marketing, marketing concept, market orientation, market planning. These are the 1957-58 recession's contribution to the organization man's vocabulary. In the two earlier recessions, it was the "hard sell."

Yet, it isn't at all clear that management in general has given to these phrases anything more than lip service. One reason may be the hard fact that the concept of total marketing—or whatever you call the dynamic process of fashioning products out of raw material, packaging them, pricing them, shipping them, and selling them—forces most companies to alter substantially their traditional ways of thinking and doing business. This isn't easy, because organizations are naturally conservative. It's much easier to talk about total marketing than to achieve it.

THE AIRLINES' PROBLEM in selling air freight is that the lines have to make their pitch on the basis of distribution as a complete, integrated system.

Right now, air freight seems to be reaching a real breakthrough. Certainly a major contribution is the fact that airlines are finally convincing some companies that you can't separate their part of the marketing job from the rest—that the primary costs of any function (in this case, transportation) are not always the real cost. Unable to sell ton-mile for ton-mile against other modes of hauling, air cargo people are now selling distribution. Lower freight bills, they insist, are no measure of efficiency.

American Airlines, for one, has been taking this story to management for the past couple of years. But its salesmen often have a hard time. Market-oriented or not, management is likely to add up the costs of various departments or functions, reach a total, and that's

it. A lower freight bill (or advertising or sales or whatever) automatically cuts total costs if you figure your costs this way.

BUT, as American salesmen are eager to point out, there's another way to figure costs. And sometimes it will lead to different decisions. Take Armour Pharmaceutical Co., a division of Armour & Co. It finally worked up a set of figures showing total distribution cost—adding in inventory costs, interest, warehouse costs, crating, lost sales as a result of out-of-stock positions. It discovered (through a test in the Southwest) that higher costs of air freight were more than offset by savings elsewhere.

The upshot has been that Armour Pharmaceutical has eliminated all warehouses (except on the West Coast), has reduced inventories 50%, and hence improved factory scheduling as well as boosting turnover. Without added distribution costs it has expanded its penetration into markets that it found weren't being adequately served. A headquarters auditor once raised his eyebrows at the freight bills, but was won over when he got the total picture. Management had been all set to build three new warehouses on a consultant's recommendation—but decided that less money spent on getting faster deliveries would make the new facilities unnecessary.

BEYOND the physical results, Armour Pharmaceutical got a better picture of its operations and how they function together, has far greater control of distribution, and has measurably improved communications in the field.

The moral isn't that air freight is better (in fact, Armour has sharply cut its original business with American in the Southwest, finding a mixture of air-surface transportation better).

The moral is simply that approaching distribution as a total process—and not one made up of separate functions—will sometimes shake a management out of long-established practices. Total marketing can be a real tool of management.

MAKING MANAGEMENT HUMAN

Gives tested methods of applying the findings of psychology to solve the everyday problems of people working together. Shows in clear language the ever-increasing role of psychology when fully understood by management, and spotlights the human side of the picture with which you must deal to achieve greatest success as an administrator. By Alfred J. Marrow, President, Harwood Mfg. Co. 241 pp., 30 illus., \$5.00

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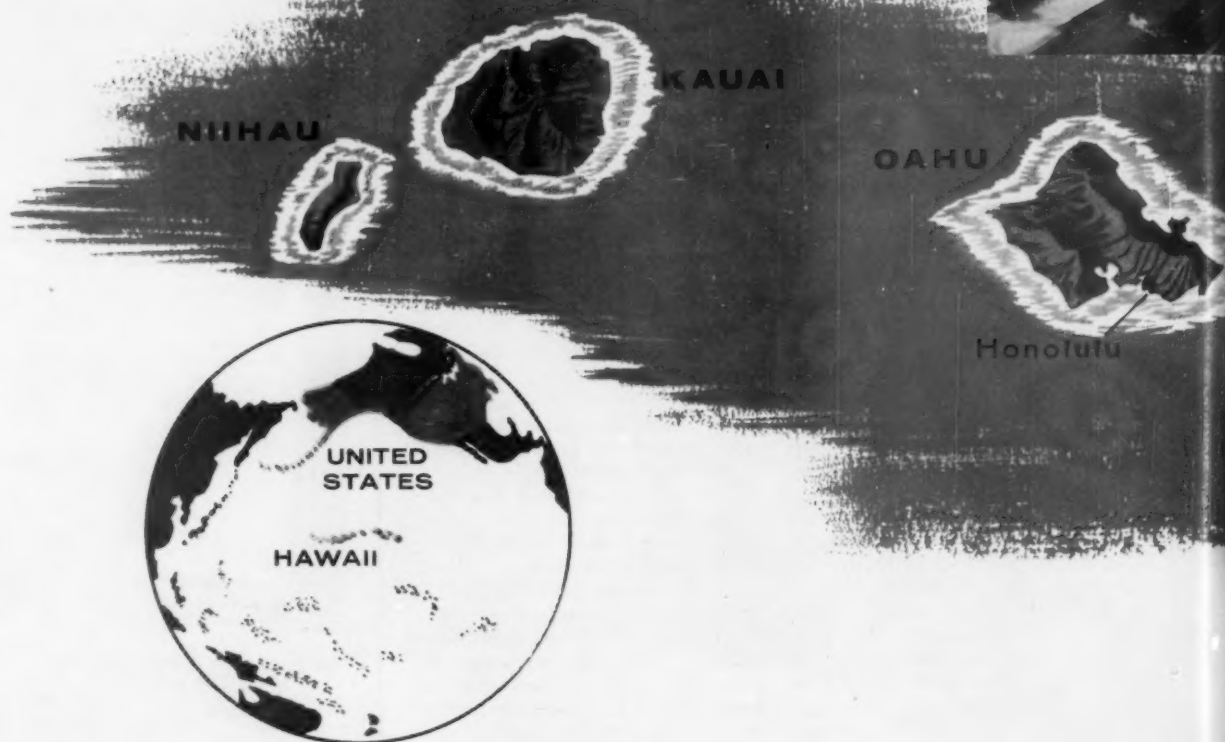
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REGIONS

Hawaii's Leading Industries



Hawaii: Set to Become an Island State

Supporters of statehood for Hawaii hope for a vote by Easter. In contrast to Alaska, the 50th state will be prosperous, populous, highly developed from the start.

U.S. flags, social studies textbooks, and the voting makeup of Congress are almost certain to change for the second year in a row. Advocates of statehood for Hawaii, encouraged by last year's success of Alaska, are confidently aiming for passage of an admission act in a matter of days.

In contrast to Alaska, Hawaii is no land of tomorrow. You have to go back to Texas to find its like among the states. Prior to 1898, when it voluntarily yielded its sovereignty to the U.S., Hawaii had been a republic and a monarchy. No other state but Texas has a serious history as an independent nation. In 1900, it was organized under the U.S. flag as a territory—and ever since 1903 it has been trying

to enter the Union as a state. Seventeen times it has applied to Congress, yet it wasn't until 1947 that either house of Congress passed a statehood bill.

I. Hawaii Is Different

Now, 12 years later, much of the opposition to Hawaii's admission has evaporated. Once Alaska had been voted in, it was a foregone conclusion that the other member of the pair would be admitted.

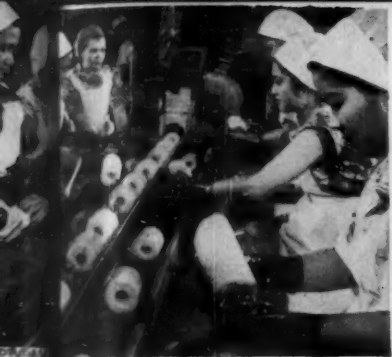
"Alaska was the needle, and Hawaii is the thread," says Rep. Leo W. O'Brien (D-N.Y.), chairman of the House Interior & Insular Affairs territories subcommittee.

It could hardly have happened the other way around. If prosperous, populous Hawaii had been admitted first, frontierland Alaska would have had a tougher row to hoe. Statehood strategists realized this a few years ago and planned the timing that seems to be working out well for both territories.

What kind of member are the 49 States electing to the lodge, and what effects will membership privileges have on Hawaii? On each side, it seems, the changes are less sharp than in the case of Alaska, though Hawaii brings a new exotic quality to the Union.

• **Civic Scoreboard**—Alaska (BW—Sep. 6'58, p155) has only 220,000 people, including 50,000 military transients, in an area more than twice as big as Texas, 99% of it owned by the federal government at the time of admission as a state.

Alaska's raw materials potential is great. The new state government looks to oil and mineral leases for the new revenue it needs to carry its new ex-



Pineapples



Sugar



Military



Tourists



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PULLING IN the net at a community fishing party. Fishing is a minor feature of Hawaii's economy, but it's one of the elements that add up to a powerful tourist attraction.

penses, such as an entire system of courts.

Hawaii (map, page 140) is a 390-mi. chain of volcanic islands in the tropical Pacific, 2,000 mi. from San Francisco. With a land area of 6,400 sq. mi. (Alaska covers 571,000 sq. mi.), Hawaii would be the fourth smallest state. But, even though only eight of the 20 islands have a significant population, Hawaii has about 620,000 inhabitants, including 40,000 military. It has more people than six states.

Hawaii has only three important natural resources: climate, soil, and scenery. Its potential is already largely fulfilled, and its government well developed under territorial status. Per capita income of \$1,876 is larger than that of 26 states; Hawaii's federal income taxes, about \$160-million, exceed the totals for 10 states. The territory's own tax structure is producing more than enough revenue to support a state government; it is running a budget surplus.

The chief gain for Hawaiians under statehood is political equality—a vote in national elections, three votes in Congress (two senators and a representative), and the right to elect their own governor (now appointed by the President).

• **What Hawaii Isn't**—The 50th state is no frontier land. Missionaries followed closely in the wake of Capt. James Cook, who discovered these "Sandwich Islands" in 1778, and their descendants started commercial development nearly 150 years ago. The oldest of Hawaii's Big Five businesses, C. Brewer & Co., dates from 1826.

Hawaii is agricultural, with sugar and pineapples as the money crops, and it shows no sign of going the way of, say, Puerto Rico in industrial development. Local wages are high—the average \$14.80 a day for workers in the sugar

industry is believed to be the highest for agricultural hands anywhere in the world. Moreover, Hawaii has no such labor surplus as Puerto Rico (unemployment last year averaged only 3.7%) and cannot offer freedom from federal income taxes as Puerto Rico can.

Hawaii attracts an increasing number of tourists, and tourism ranks close behind sugar and pineapples as a source of income (military spending is still the No. 1 source). But Hawaii shows no sign yet of becoming a retirement haven like Florida or Southern California. Its cost of living (22% higher than Washington, D. C., according to a federal survey) isn't excessive, but land is expensive and hard to acquire. Geography, too, is against selection as a retirement homeland.

Climate and scenery attract tourists. The temperature rarely goes below 60 or above the mid-80s. The islands are mountainous; the shores are picturesquely clad in palm trees, with beautiful beaches. And the population has a "foreign" look that appeals to tourists.

• **The People**—No state or other U.S. possession has quite the ethnic diversity of Hawaii. Even in sparsely settled Alaska, white incomers far outnumber native Indians and Eskimos; in Hawaii, however, Caucasians make up only 23% of the population.

The largest segment of Hawaii's population consists of Japanese, 37% of the total. Next come people of Caucasian ancestry, then Hawaiians (of Polynesian stock, 17%) and Filipinos (12%). Chinese, making up 6.5% of the total, are oldest Asian group represented in Hawaii, and they have made the greatest economic progress, recently topping even the Caucasians in per capita income.

Chinese have become especially active in real estate. Hiram L. Fong, Harvard



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HONOLULU has one of the world's great harbors. Here, sugar is being loaded.

Law School graduate and former speaker of the territorial House, heads Finance Factors, a real estate and finance company. Chin Ho's Capital Investment Co. has branched into real estate developments around San Francisco. K. J. Luke's Loyalty Enterprises is building a subdivision near Honolulu Airport. Hung Wo Ching took time from real estate to rescue Aloha Airlines from financial troubles, buying turboprop airliners.

Japanese are expanding their business interests in banking. In May, Japanese-American backers will open a new bank, City Bank of Honolulu, with two key officers—executive vice-president and loan officer—brought in from Japan's Mitsui Bank.

II. Business in the Islands

Work starts at dawn in Hawaii. And in the tropics the sun is up by 7:15 a.m. on even the year's shortest day.

Brokerage offices and other businesses closely linked with the mainland are well staffed by 7:30 a.m., most offices are in full swing by 8, and even the top executives show up by 8:30. One reason is to ease up in the heat of the day, yet still get home early to enjoy outdoor living; the other is to overlap as many business hours as possible with those of the mainland—there's a five-hour time difference between New York and Honolulu.

To see the commercial center of Honolulu at work would give you no hint that you weren't in any big U.S. city. Despite occasional campaigns for "more sensible" dress, most Hawaiian businessmen wear coats and ties, and you see few of the brightly patterned short-sleeved shirts that are regarded as Hawaiian.

• **The Big Five**—You can't talk about Hawaii's business world without talking

about the Big Five companies that once monopolized it.

World War II brought in the military as the new leading money source, now around \$300-million a year, and Uncle Sam took a bigger part in island affairs. The postwar shuffle and expansion of business also brought more mainland business concerns to vie with the Big Five. But the Big Five still own or control 25 out of the 27 sugar plantations, five of the eight pineapple canneries, and the Matson Navigation Co., which dominates shipping to and from the mainland.

The five companies are C. Brewer & Co., founded in 1826; Theo. H. Davies, a British family firm, 1845; American Factors, Ltd., 1849; Castle & Cooke, Ltd., 1851, and Alexander & Baldwin, Ltd., 1874.

Originally, they were factoring houses, selling Hawaiian goods to the mainland and buying mainland goods for resale in Hawaii. But they expanded their business into virtual control of the island economy. "A feudal principality," a congressman described it prior to World War II.

• **Changing of Guard**—The Big Five used to represent most mainland suppliers; today, most big stateside companies have their own outlets in Hawaii. The Big Five used to bring in most retail goods; today, mainland retailers such as Sears, Roebuck & Co. and locally owned supermarket chains have taken the lead. Pan Am, United, and Northwest airlines now carry more passengers than Matson does; the Big Five no longer own any Waikiki hotels.

Management within the Big Five companies has changed, too, as younger men—mostly professional managers from the mainland—have taken over. One reflection of the change has been the Big Five's recent support of statehood—they used to oppose it bitterly, preferring a territorial government they felt they could influence more effectively than elected officials.

• **Communist Issue**—It was not the direct opposition of the Big Five, however, that delayed statehood so long. It was the indirect result of their fight against organization of Hawaii's workers when the unions started moving in after the war.

To fight the unions, large employers hammered away at charges that labor leaders were largely Communists, and they built up the Communist menace so zealously that the issue blocked statehood for years.

Today, businessmen will concede that the Communist influence of even Harry Bridges' International Longshoremen's & Warehousemen's Union was exaggerated. The FBI's last count puts the number of Communists in Hawaii at around 25.

Some businessmen still oppose state-

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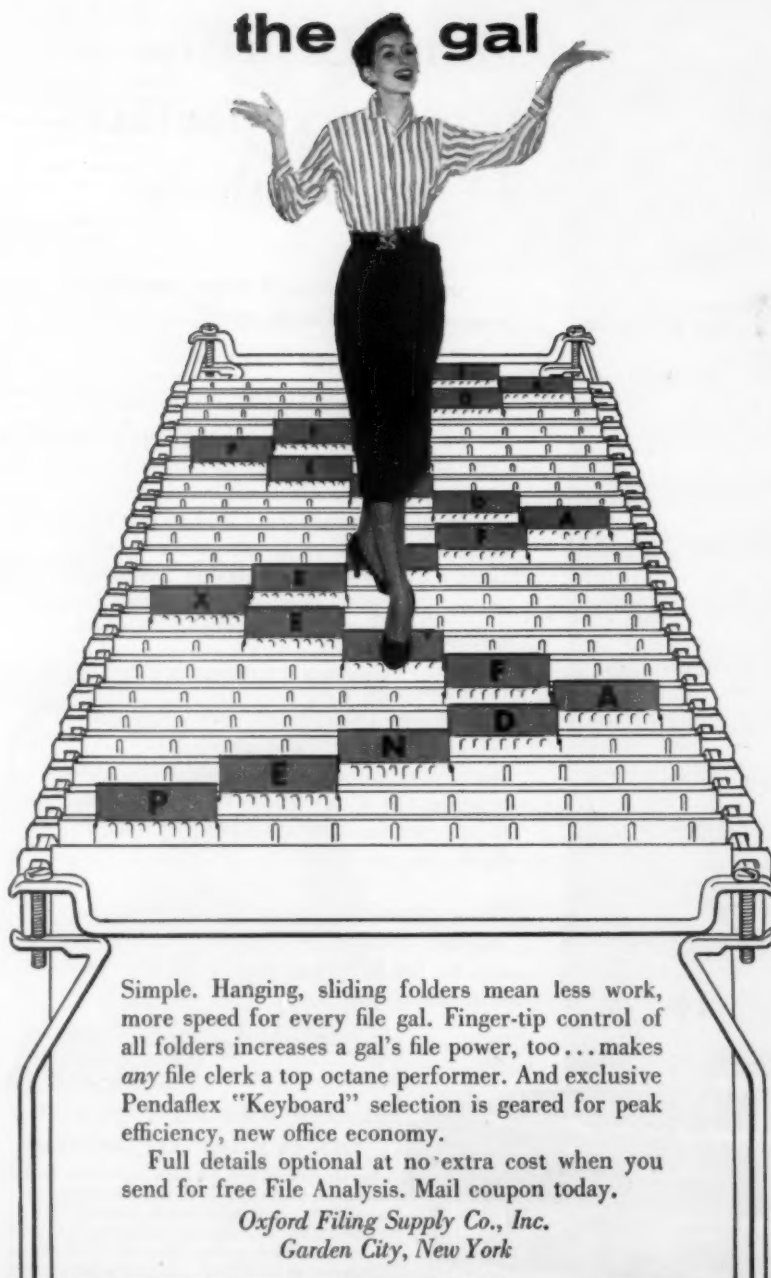
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"... tourism will soon overtake pineapples as a source of earnings ..."

HAWAII starts on p. 140

hood, on the Communist issue. One of their leaders is Walter F. Dillingham, chairman of the Bank of Hawaii and probably the islands' wealthiest homegrown citizen. Dillingham has an industrial empire that causes him to be called "The Big Sixth." He now says he assumes statehood is imminent and he has reconciled himself to it.

• **Labor Force**—Union organization has now spread so one in five workers belong to unions, nearly half of them in sugar and pineapples. Defense is still the top-ranking single employer, accounting for one out of eight workers.

Sugar, with \$150-million annual sales, is the largest civilian industry, but mechanization has cut both acreage and employment. The islands still produce the same 1-million tons a year as in the 1930s, but the industry employs only 17,000 workers—far less than half the number 20 years ago.

Employment in the pineapple industry fluctuates from a low of 9,000 to a summer peak of 22,000. The industry ships about 30-million cases of canned fruit and juice each year, about \$110-million worth.

• **Tourist Trade**—At the rate it's growing, tourism will soon overtake pineapples as a source of earnings. In 1946, the first postwar year, the tourist business brought \$6-million to Hawaii; last year, \$83-million. In addition, the islands benefit from money spent by the air and ship lines and their employees.

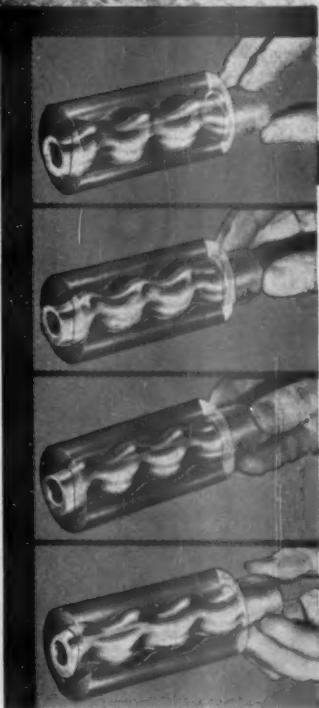
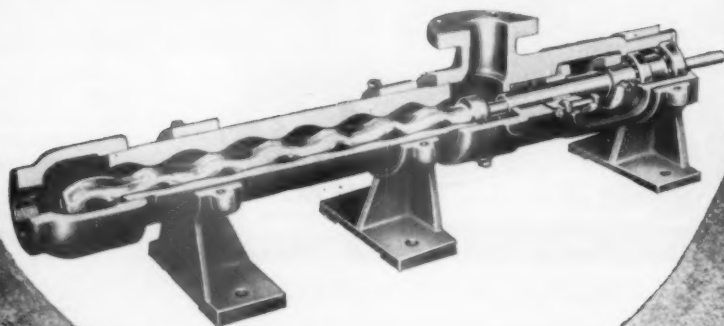
Hawaiians are confident that the jet age will spur the growth of tourism, by permitting them to tap the mass market in the Eastern U.S.

Waikiki Beach—a tourist attraction that's too rich for the blood of most Hawaiians, who go instead to public beaches—now has hotels with an aggregate 4,500 rooms, and there is talk of 1,500 more rooms. The chief hotel operators are the Sheraton chain, which bought Matson's four hotels; Henry J. Kaiser and Fritz J. Burns, who built a 900-room hotel in a former "dead end" area of Waikiki, and Roy J. Kelley. Hilton has announced it will build a 1,000-room hotel.

III. From Here, Where?

Hawaii isn't growing at a boom rate, though planning authorities expect the island of Oahu to double its present 400,000 population by the year 2000. Oahu, site of Honolulu and Pearl Harbor, is one of the smaller islands (the

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agricultural island of Hawaii is the largest), but it is by far the most important.

Oahu has most of the manufacturing, such as it is. In 1954, the latest year covered by statistics, the islands' record of value added by manufacture was about the same as that of Montana—around \$140-million. Most of the manufacturing is for local consumption, and it will grow chiefly as the local market grows.

Standard Oil Co. of California, for example, is building Hawaii's first refinery right now. A mill to manufacture steel reinforcing rods is under construction. Local plants make furniture, television tubes, and clothing.

• **Limited Land Use**—Advocates of encouragement to industry, such as the territory's Economic Planning & Coordination Authority, have often run into opposition from the "Keep Hawaii beautiful" element, but fewer people these days flatly oppose industries of the less disfiguring sort.

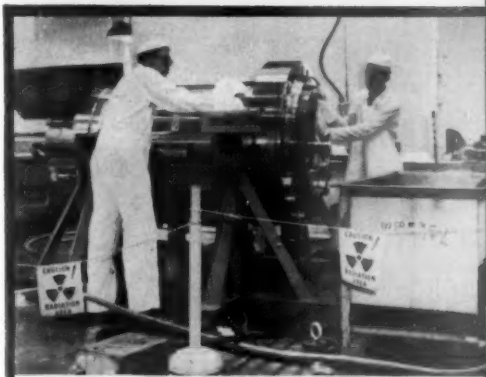
The chief drawback either to industrialization or to homebuilding is the lack of available land on Oahu. The island has an area of 604 sq. mi., only about twice that of New York City, and much of it is mountainous. The rest is largely under federal ownership (14% of the island) or that of powerful interests such as the Big Five, estates, and charitable institutions.

These owners traditionally insist on leasing land, rather than selling it. Leases generally run for 55 years. A lot for a \$20,000 house may cost \$175 a year; however, homebuilders point out that the leasing of land reduces the downpayment. When land is sold at all, it may run as high as \$2.50 or \$3 a sq. ft.—as much as the choicest industrial land on the mainland.

• **Pocketbook Rationing**—Ever since they came into power in the territorial government five years ago, the Democrats have been working up a case for land reform.

Real estate in Hawaii is assessed according to current use of the land, rather than actual market value as reflected in recent sales. Thus, the owners can afford to keep large tracts off the market and can maintain high land rentals by rationing their leases like diamonds.

Democrats—the party in the islands is headed by John A. Burns, Hawaii's delegate to Congress—claim to have a study that shows large inequities in assessments. However, Gov. William F. Quinn, Republican appointee, says a Public Administration Service report shows assessment policies aren't that bad. The legislature is working on bills to revise the assessment structure or to allow the government to condemn land for homesites, but Quinn threatens to veto any drastic action. **END**



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THE REGIONS PATTERN

Odds on "Downtown" Survival

PUBLICATION of the New York Metropolitan Region Study later this year will throw more light on the struggle of American cities to survive in a changing economy (BW—Feb. 21 '59, p29).

It isn't that New York is a typical city with which others can easily identify themselves. But economists, political scientists, and sociologists expect that the \$480,000 study—sponsored jointly by Ford Foundation and the Rockefeller Bros. Fund—will be broad enough to provide something for everybody.

Dr. Raymond Vernon, study director, has been tipping his hand in papers and speeches since the study began in 1956. The most recent, a paper for the Committee for Economic Development, wraps up what its title suggests: The Changing Economic Function of the Central City.

One of Vernon's major topics—the central city's growing reliance on office-type activity—is a two-sided coin.

He stresses the point—which he and others have made before—that one of the two major generators of office-type activity is the central office function of large businesses: manufacturers, utilities, transportation companies, and the like. And he asserts that the principal, if not the only, beneficiaries of growth in this type of economic activity will be a few large cities.

THE OTHER SIDE of the coin is that the very large cities will gain at the expense of the regional center-type cities. Vernon could be accused of a pro-New York bias. Since his study is addressed to New York City's future over the next 25 years, skeptics might claim that he is merely trying to assure New York that its incredible pace of new office construction will continue indefinitely.

But other students of urban problems say the same thing. Outside New York City, they suggest, the only cities likely to get any surge of new central offices might be Los Angeles, Houston or Dallas, possibly Chicago. On the other hand, the Bostons, Philadelphia's, Cleveland's, and Denvers will find themselves left out.

The pity for these large cities is

that there is little they can do about it. Airplanes made it easy for management to function at a central location; now jets make it easier. Too, the speed with which new data-processing equipment can function strengthens the case for centralization. And other cities can't compete with a New York for business atmosphere, for the opportunity to be on top of happenings in finance, or for nearness to suppliers, customers, bankers, and advertising agencies.

The smaller large cities aren't after central offices because they are central offices. Rather, in most cases, it's because they need new capital to pep up their central business districts.


PUBLIC CAPITAL can go only so far. It can build a new city hall, post office, or auditorium. But these aren't enough. Private capital won't build factories or warehouses in the central city because of the congestion and difficulty in picking up large enough tracts of land for modern buildings. Private capital won't build new department stores because the central city is losing populations and jobs to the suburbs.

Even with federal assistance under the urban renewal program, cities are finding it hard to lure enough middle-income families back.

So, the office function remains the one way in which private capital can stimulate the central city.

New buildings are going up around the country, mostly to satisfy pent-up demand for air-conditioned space. But some cities have yet to get their first new, major building.

Vernon feels that the smaller cities will find some opportunities among local financial institutions or firms operating nationally—unless they see greener fields in the suburbs. But once out of such candidates, these cities are in real trouble. It will be a hard sell to bring in the central offices of big concerns, and the ones they have may be tempted to move away. They may even find their local businesses being absorbed by larger corporations—wresting away the central office function without a shot being fired.



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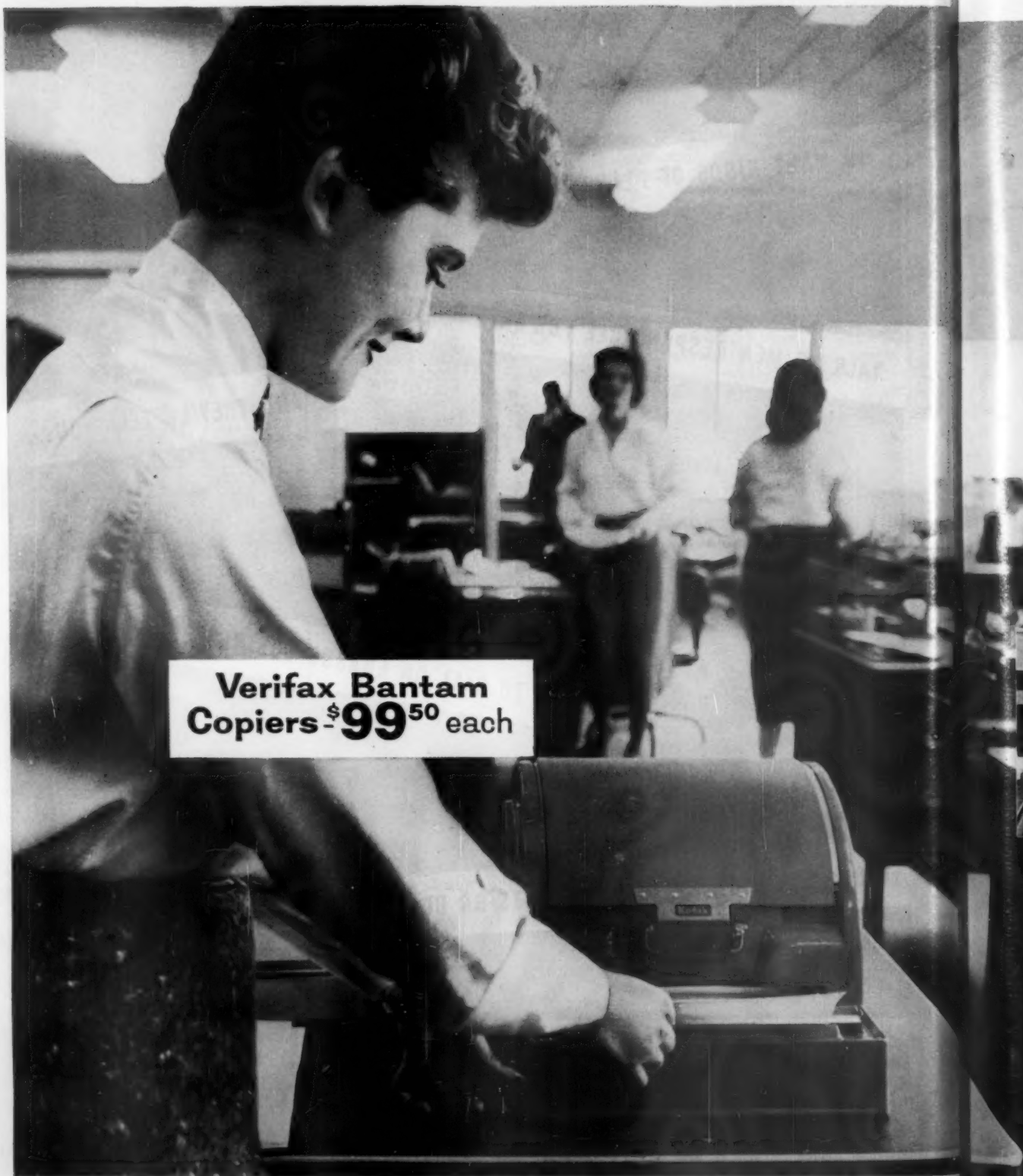
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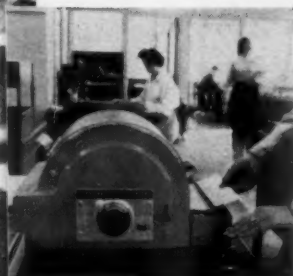
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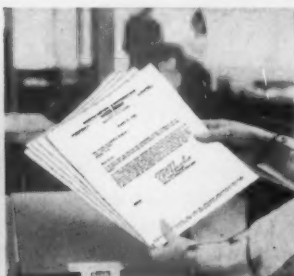
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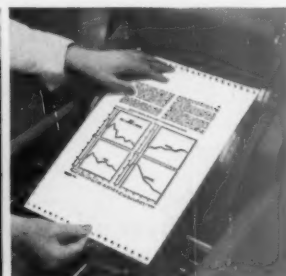
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New Mexicans Seek Law Permitting Federal Sale of Vast Land Holdings

Of the 400-million acres of land owned by the federal government, nearly half is administered by the Interior Dept.'s Bureau of Land Management, mainly for grazing. Practically all of it lies in 11 Western states.

Last week, two unconnected events reflected the growing pressure on the federal government to sell some of its real estate:

- In Denver, Interior Secy. Fred A. Seaton said his department was preparing a bill to permit the sale of public lands, under certain circumstances, to state and local governments and to private interests.

- The Denver Post said that an association formed by leading New Mexicans is drafting a proposal to transfer 200-million acres of federal land to state and private ownership.

Undoubtedly, Seaton would not go so far as the New Mexico Land Resources Assn. His primary objective seems to be to permit Western communities to grow in cases where federal land now locks them in. Such sales are not now possible under law, which limits Washington to selling public land to non-profit organizations or state or local governments for public purposes, at a rate of 640 acres per year per state.

Now the New Mexicans, on the basis of a three-year study by the Southwest Research Institute, want a law permitting federal sale of grazing land and non-timbered lands that aren't needed for watershed protection in Agriculture Dept. national forests.

States would buy the land on long-term payments at low interest, and then resell to private owners, retaining mineral rights, according to the Denver Post.

. . .

Gulf Oil Eyes Charleston, S. C. For Refinery to Serve Southeast

For some time, it has been practical, in theory, for oil companies to build refineries in Southeast port cities. Two factors would make such locations sensible: (1) increasing imports of crude oil and (2) growth of the Southeast market. But so far no one has put theory into practice.

This week, it looked as if Gulf Oil Corp. were preparing to build a \$100-million, 50,000-bbl. refinery at Charleston, S. C. It sent engineers to make detailed surveys of a 3,000-acre tract it bought in 1956. A construction schedule may be announced this summer.

Gulf and other companies had not acted previously because of uncertainty over federal controls on crude imports, the Suez Canal closure, oversupply of product, and reduced demand during the recession.

Now Gulf thinks the only deterrent left is confusion over the future of imports; so it has decided to move. To

Dr. Jerry McAfee, manufacturing vice-president, it's simple economics: Greater imports are inevitable in the long run, it takes two to three years to build a refinery, and building prices will probably be less in 1959 than in 1965. The refinery would be geared to handle both domestic and imported crude.

Gulf specifically chose Charleston because it is half-way, by water, between its largest refineries—Philadelphia and Port Arthur, Tex.—and because it is in the heart of the Southeast market.

. . .

Goodrich to Close Money-Losing Plant Despite Citizens' Pledge of \$26,000

As the market, product, and production patterns of manufacturers change, many a town has had to face up to losing a branch plant that's losing money for its owners but providing work for some townsfolk.

That's what is happening in Cadillac, Mich., an up-state city of 10,000, where B. F. Goodrich Industrial Products Co. will close a small plant supplying rubber products to the auto industry.

Goodrich repeated its decision last week after a citizens group pledged \$26,000 to persuade the company to stay. The money would have been paid Goodrich if the plant lost money again this year.

But in Akron, Pres. Clyde O. DeLong was not swayed. He said the company had not been getting "this kind of cooperation" before, that productivity in Cadillac had failed to keep up with wage increases, and that the plant—whose payroll had declined from 700 to 200—lost \$300,000 last year.

. . .

South Florida's Tourist Season Tops Lowly 1958, Is Way Below Banner 1957

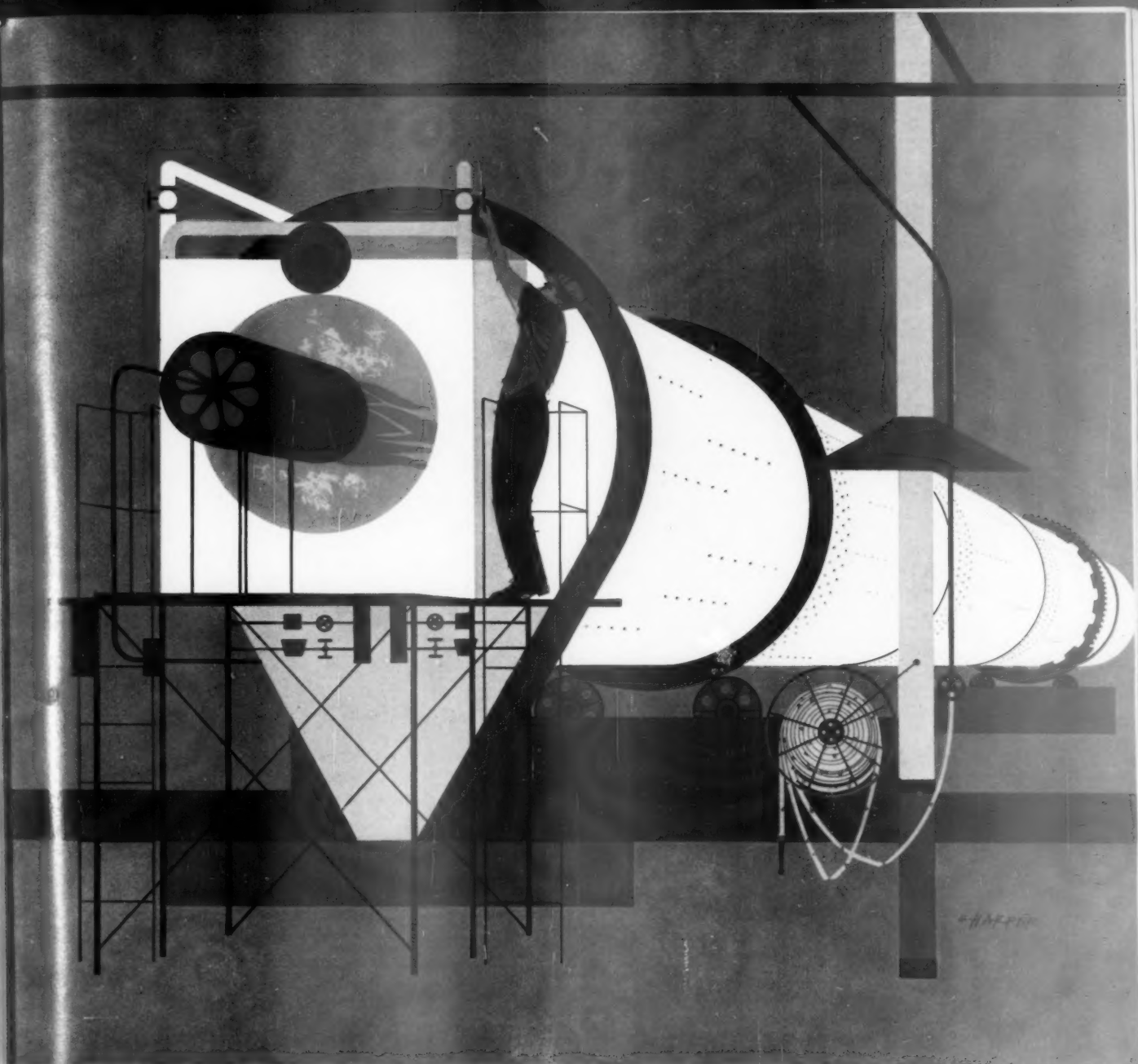
Enough of South Florida's tourist season has gone by to warrant a conclusion on business: better than last year's miserable season, but below record 1957.

After a slow start, partly blamed on the strike at Eastern Air Lines, business seems likely to wind up the season 15% to 20% ahead of 1958. Not all hotels will have shared equally in the increase, and many will find profits slim because of rate cutting and higher costs.

The big, plush hotels have done nicely. The Americana, for example, boasts a "fabulous" season. But the owner of a medium-sized hotel had less reason to cheer: "We've done better than last year, but there's been no real sock. We've taken a deal here and there to hold a tourist and keep the rooms occupied."

Other tourist attractions have also benefited unequally from the revived business. Hialeah reports betting off slightly from last year—possibly because of the nice weather that kept people glued to the beaches—but betting on jai-alai and greyhound racing was up.

No new hotel bankruptcies have turned up yet. But local property taxes are not due until Mar. 31; if the bottom should drop out of business between now and Easter, some operators might go under.



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INTERNATIONAL OUTLOOK

BUSINESS WEEK

MAR. 14, 1959

A BUSINESS WEEK

SERVICE

This week's revolt in Iraq is intensifying the already grim struggle for power in the Middle East. The new flareup is sure to spell more troubles for the West in dealing with the oil-rich Arab countries.

The most basic conflict is between Arab nationalists, led by Pres. Nasser, and Arab Communists, backed by Moscow. Last year Nasser got Syria in his clutches. His campaign for Arab unity was spreading fast. But soon it ran into a roadblock—Premier Kassem's Communist-backed regime in Iraq. Since then, the Nasser-Kassem feud has blown hot.

The Communists' fast-tightening grip on Kassem triggered this week's army revolt in the Mosul oil fields. Army officers there are anti-Communist and generally pro-Nasser.

At midweek, all signs pointed to a victory for Kassem—and the Communists around him. The Baghdad government let Communist mobs and Communist propaganda go wild. It kicked Egyptian representatives out of Iraq. It even directed air strikes at border villages in Syria (part of Nasser's United Arab Republic).

Nasser won't take his setbacks in Iraq lying down. He might be panicked into trying to swing a deal with Moscow to bolster his prestige. He already is relying on large-scale Soviet economic and military aid. But, more likely, he will move closer to the West for help.

That's partly because Arab Communists now are championing the cause of smaller Arab states against Nasser. And it's quite a switch from six months ago. The Communists then were backing Nasser's Arab-unity drive in Lebanon and Jordan.

Reason for the shift in Communist tactics is easy to see. Moscow last year supported Nasser to help weaken the West's influence in the region. Now Nasser is the main obstacle to Soviet penetration of the Middle East.

Either way the tide turns, the situation is gloomy for the West. If Iraq later should join with Nasser, that would create a united Arab front in oil negotiations. Yet, if Iraq stays independent and gets stronger, it could gradually pull neighboring Syria from Nasser's control. And there would be no end to Soviet expansion into the Middle East.

A foreign ministers' conference on the Berlin crisis will probably take place in early May. And a summit meeting, after that, looks more and more likely.

But no one, here or in West European capitals, is counting on a peaceful East-West compromise over Berlin. What's certain is that the diplomatic maneuvering will grow more complex—and confusing—in the weeks ahead.

For all his talk, Soviet Premier Khrushchev hasn't made any real concessions on the Berlin question.

Stumping Communist East Germany this week, he offered to "guarantee the safety" of West Berlin with neutral troops or contingents from both the three Western powers and the Soviet Union. At the same time, he threat-

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

MAR. 14, 1959

ened to sign a separate peace treaty with East Germany and to drive the West from Berlin.

Washington sees a small ray of hope in Khrushchev's troop offer. It could become the basis for leaving the Berlin situation pretty much as it is now—with the Allies controlling West Berlin, Soviet troops stationed in East Berlin, and East Germans exercising only nominal authority. But that's on the assumption that the Soviets back away from a full-fledged crisis.

Khrushchev's immediate aim is to divide the West before negotiations. Key target is Britain. A high-ranking Soviet delegation, headed by Mikhail A. Suslov, secretary of the Communist Party, arrived in London this week partly to woo Britishers.

Western powers aren't, in fact, in complete agreement on how to meet the Berlin crisis. Pres. de Gaulle and Chancellor Adenauer are taking a tough line. By contrast, Prime Minister Macmillan, following his Moscow visit, is slightly more conciliatory.

Conflicts among the Allies, however, are mostly on the surface. There's general agreement on holding fast in Berlin, even at the risk of war.

Real battle is in Washington. Pres. Eisenhower's opposition to talk of emergency mobilization and his support for projected cuts in the armed forces are stirring controversy. By Administration policy, any war over Berlin would involve nuclear weapons and existing armed forces. But Democrats, led by former Secy. of State Acheson, are clamoring for a bigger defense effort.

—•—

Foreign aid is getting rough treatment from Congress.

A House subcommittee initially slashed the Administration's request for money for the near-bankrupt Development Loan Fund from \$225-million to \$50-million. The committee at midweek jumped the figure to \$100-million.

Thus, the DLF will have enough funds to participate in the next round of multilateral aid for India's hard-pressed development program. (Negotiations with India begin later this month.) But that won't leave much money to assist other underdeveloped countries asking for aid.

—•—

Washington, after prodding from Latin American countries, is beefing up its contribution to the new Inter-American Development Bank. It's adding \$150-million to its original pledge of \$400-million. That raises the bank's total capitalization to \$1-billion—\$850-million for hard loans (repayable in gold or dollars), \$150-million for soft loans (repayable in local currencies).

Economic troubles continue to plague Latin countries.

In Bolivia, low living standards—as well as chronic anti-Yankee feelings—helped set off last week's rioting. Tin, the economy's kingpin, is bringing in less and less foreign exchange. The government's economic stabilization program, backed by sizable U. S. aid, is reportedly falling apart.

In Argentina, austerity is creating widespread unemployment. Unemployment may reach 10% by yearend.

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GOVERNMENT

The Cops on the Antitrust Beat

To U.S. businessmen, few men in government are more important today than the staff of the Justice Dept.'s Antitrust Div.

The men pictured at right and on page 163 are a sampling of the key people in the Antitrust Div. of the U.S. Justice Dept. They are lawyers. With the exception of Asst. Atty. Gen. Victor R. Hansen, head of the division, they are civil service employees of the federal government. And to businessmen they are probably more important, personally, than any similar group of federal employees you could pick.

For—more than in any other area in which government impinges on business—antitrust policy is government by men rather than government by laws. The Sherman and Clayton Antitrust Laws are very broad, very vague pieces of legislation. There have been long periods since they were enacted when they meant very little. Right now, they mean a tremendous lot. They mean that the Bethlehem Steel Co. will not be able to merge with the Youngstown Sheet & Tube Co. They mean that du Pont has to work out a way to get rid of its 23% interest in General Motors Corp. They may very well mean that over the next few years General Motors itself may be split up into several smaller companies.

• **Lawyers' Law**—Any law, of course, means what the courts say it means. But it's not just the courts that define antitrust law. Even more, antitrust law is written by the lawyers who, year after year, decide what cases to bring and how to prosecute them.

The members of the Antitrust Div. pictured are typical of those who every day investigate complaints against business. They decide whether to file a suit; they work on the actual court trial and negotiate consent settlements. They oversee the activities of some 240 lawyers and 40 economists and statisticians engaged to enforce the antitrust laws. As their win-loss record indicates, they are good at their job. By their own count, the antitrusters win about 90% of their cases.

• **Who Are They?**—To a large extent, the government antitrust lawyer is virtually an unknown. A few of the top men, such as Thurman Arnold, acquire a wide reputation. But most come into their jobs not well known, stay only a few years, and then leave—often to far more lucrative spots in private law practice or to posts as judges in the federal courts.

This has been the normal course of



VICTOR R. HANSEN, 55, chief of Antitrust Div. since 1956, went to USC, practiced law in Los Angeles 23 years, sat as Los Angeles Superior Court judge 1951-1956.



ROBERT A. BICKS, 32, Hansen's top assistant since 1957, is a Yale man. He was legislative aide to ex-Sen. Ives (R-N.Y.), studied antitrust law for Attorney General.



HARRISON F. HOUGHTON, 47, attended Drake and Columbia. He has been government's star economist in many cases, including Bethlehem-Youngstown merger.



DONALD F. MELCHIOR, 43, alumnus of University of Maryland, has been antitrust trial lawyer 11 years. He was Justice's No. 2 man on Bethlehem merger case.



ALLEN A. DOBEY, 50, went to Yale, has been antitrust prosecutor since 1938. He was the Justice Dept.'s chief trial counsel in suit that stopped Bethlehem merger.



WILLIAM D. KILGORE, JR., 39, is a George Washington graduate. With Antitrust Div. since 1945, he is now its top man on negotiating consent judgments.

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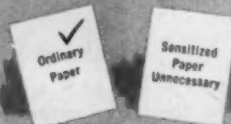
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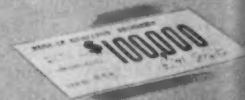
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JOHN T. DUFFNER, 46, was educated at Georgetown. He is a chief architect of government's anti-merger program, now handles liaison with Congress on antitrust legislation.



CHARLES L. WHITTINGHILL, 45, went to Montana State, heads general litigation section. He worked on the recent United Fruit case, joined Antitrust in 1941.



GEORGE D. REYCRAFT, 35, a product of Harvard, is in charge of seeing that du Pont divests itself of GM stock. He will direct New York's grand jury probe of GM.

(Story starts on page 161)

events. And the same turnover occurs throughout the division. New faces constantly appear among the men close to the top. Trial lawyers come and go.

The people who make up the Antitrust Div. have varied skill and experience, and they come from all over the country. Among them are some 100 staffers in Washington who were there at least 10 years ago. And quite a number in Washington and the six divisions around the country have upwards of 20 years' experience.

At the same time, there are a lot of younger lawyers in the division—some of them in important posts, though they have relatively short government experience. Most of the really young men have come in through a program that brings in about 15 top graduates of the big law schools each year. Their term is two years, but Hansen says he has kept on more than 40 who came in this way in the past five years. They make up a fairly large proportion of the 150 or so lawyers in the division's Washington headquarters.

• **Salary Scale**—Government antitrust lawyers are not highly paid. The law school graduate or man with no experience starts out at \$4,980 a year; after years of work, a top trial attorney can expect around \$12,000 a year. The section chiefs—the men who supervise teams of lawyers—and the heads of the field offices get about this figure.

But the bulk of the antitrust lawyers make only \$8,000 to \$9,000 a year.

I. Philosophy or No

There have been times, particularly in the New Deal years, when the Antitrust Div. had a crusading drive. An antitrust chief like Wendell Berge felt a mission to maintain a multiple, diffuse character in the economy. One like Thurman Arnold had a definite policy

of trying to keep businessmen off balance, uneasy, and constantly examining their consciences.

Under the Republican Administration, the antitrusters are not crusaders. Hansen and Atty. Gen. William P. Rogers see themselves as public servants enforcing a law—a law they approve of but do not theorize about much.

But to the businessman watching a steady stream of prosecutions, the practical difference between a crusader and a working lawyer is not too great. The laws are being vigorously enforced, just as vigorously as under the Democrats. Under any Administration, an antitrust is a prosecutor and is out to show that he knows how to enforce the law. Up and down the organization are men who have no intention of spending their lives in government service; they want to make a record, and they know that the best way to make a name and a reputation is to be able to point to a record of achievement—and, for an antitrust, achievement means cases filed and won.

• **Pressures**—To a degree, too, circumstances have forced the hand of today's antitrusters. The massive antitrust drive against big business faded out with the New Deal. But now, almost willy-nilly, Hansen is conducting a series of cases that mark an historic extension of the antitrust laws.

Hansen's first great victory was the divorce of du Pont and General Motors. In the trial court, the government suffered a complete defeat; unexpectedly, the Supreme Court handed the government a victory on a point of law that the government lawyers had treated as relatively insignificant.

Congress precipitated the next big case. After the Supreme Court had allowed U.S. Steel's subsidiary, Columbia Steel Co., to buy Consolidated Steel Co. in 1948, Congress decided to rewrite the anti-merger provisions of the Clayton Act. So it was just about

preordained that when Bethlehem tried to merge with Youngstown, the Antitrust Div. would move in.

With those broad decisions under their belts, and with Congressional committees conducting a running campaign about concentration and administered prices, it was a fairly expectable next step to turn to the long-pending question of whether General Motors' size gives it too much power. And last month Hansen asked for a grand jury.

II. The Men

A key fact about the staff of the Antitrust Div. is that the pervasive influence of the economist does not show up there as it does in most government regulatory agencies. There is no master-planning shop setting goals for the prosecutors. In fact, some critics—though hardly many businessmen—have demanded an expansion of long-range economic thinking in the division.

There are economists in the division—about a dozen of them who count—but they are essentially aides to the lawyers. Typically, one might be helping some lawyer define a market against which the market facts of a particular case can be judged. It is the lawyers who make policy.

Victor Hansen, who took charge of the division in 1956, left a background of 20 years of law practice in Los Angeles and a judgeship on an important trial court in the California state court system. He had only a general knowledge of the antitrust laws.

Hansen is professorial, mild-mannered, speaks softly but directly. In his early exposures to Congressional investigating committees, he occasionally got flustered, but now he handles such assignments with ease.

• **First Lieutenant**—Seeking to be an efficient administrator, Hansen relies heavily on the men around him. His

No. 1 assistant is Robert A. Bicks. Bicks, son of a New York federal court judge, has risen very fast.

Bicks started his antitrust career as secretary to the blue-ribbon Attorney General's committee to study the antitrust laws between 1953 and 1955. He was a top aide to Stanley N. Barnes, Hansen's predecessor as antitrust chief. Under Hansen, Bicks closely supervises all phases of the division's staff and is in on policy decisions as well.

Bicks will sometimes appear as the Justice Dept. antitrust spokesman before Congressional committees. Hansen has also picked him to argue some antitrust cases before the U.S. Supreme Court. For instance, Bicks argued the recent Procter & Gamble Co. case, in which the antitrusters won reinstatement of a monopoly case against the Big Three soapmakers and the right to use evidence obtained in a grand jury investigation without allowing the companies to see the grand jury records. Bicks also helped to present arguments in the Bethlehem merger case.

• **Staff**—W. Wallace Kirkpatrick, 45 years old and a career man, is Hansen's second assistant. Kirkpatrick has been in Antitrust since 1938, except for war service and three years as general counsel in the office of the U.S. High Command for Germany. He is a desk man, checking all pleadings and communications, but he also figures in policymaking.

Hansen has done some reorganizing of his trial sections. There are four: general litigation, headed by Charles L. Whittinghill; special litigation, headed by Lewis Bernstein; trial section, headed by Baddia J. Rashid, and special trial, headed by George D. Reyecraft.

These section chiefs—together with Hansen, Bicks, and Kirkpatrick—are the policy and operational heads in the Antitrust Div. Each section chief is responsible for and supervises between 25 and 30 lawyers engaged in investigation and trial of cases. Each section is a self-contained unit, capable of prosecuting any kind of case—ranging from a simple charge of price-fixing to a complicated anti-merger case.

III. How Cases Are Picked

The origin of any one antitrust case can be as hard to pin down as the origin of a business decision. It can involve political, economic, and legal factors. But generally, complaints come into the antitrusters four ways:

- Complaints from businessmen themselves that they are being driven out of business or are victims of unfair advantage or practices are by far the most common source, antitrusters say.

- Often a government case on, say, price-fixing of bread in one area of the country will stimulate a flow of com-

plaints on similar practices elsewhere.

- Sometimes the antitrusters simply read something in newspapers or trade journals that sets them off on an investigation. This is usually how mergers are picked for review, for instance. But the antitrusters say they also frequently get complaints from competitors about certain mergers.

- Congressional hearings will sometimes bring out a situation that the antitrusters want to check into or that arouses other businessmen to send in complaints. The antitrusters cite the current hearings on automobile finance companies as an example of this.

Sometimes, too, an antitrust chief may find himself deciding to press a case that has been inherited from his predecessors—the du Pont-General Motors case, for instance.

- **Procedure**—An investigation of a complaint or a situation can be handled by one lawyer's phone call or it may require a full investigation by the Federal Bureau of Investigation that could extend over the whole country and take months. Many complaints that come in don't show, on the face of them, antitrust violations. Some, such as an investigation of television network practices, involve long and difficult fact-hunting by experts.

Eventually, the antitrusters look at the evidence they can gather and decide whether or not they have a case. If they do, they have to try to decide in advance whether they should file a civil or a criminal complaint.

- **Civil or Criminal**—It is the division staff that makes the initial recommendation whether to convene a grand jury and go after a criminal indictment or to file a civil suit. In general, the government lawyers say they use grand juries to prosecute the following types of offenses: (1) price fixing, (2) violations where there is proof of a specific intent to restrain trade or to monopolize, (3) predatory practices, such as boycotting, (4) a second offense, where a defendant may already have been convicted for the same violation, and (5) cases where a company knows that others have been successfully prosecuted in civil cases for the same thing.

Grand juries—as in the General Motors case—have played a big role in antitrust prosecution down through the years. Hansen insists he doesn't use grand juries as “fishing expeditions” for information—whereas, back in the New Deal days of Thurman Arnold, the antitrusters bragged about going after almost every case with a grand jury.

In practice, the difference can be hard to see. Regardless of how sincerely today's antitrusters go after a criminal indictment, he has often been happy to settle later by filing a civil case when the grand jury would not indict—and has happily used whatever new informa-

tion he was able to glean in the secrecy of the grand jury room.

- **The Differences**—There are at least two differences between the effects of a criminal indictment and those of a civil suit:

- A criminal case can result in substantial fines (defendants in the A&P case paid about \$175,000 in fines in the days before the fine was raised from \$5,000 per offense to \$50,000) or even a jail sentence (though imposition of jail terms has been very rare).

- A civil suit, on the other hand, is aimed at getting a court order, telling the businessman to stop what he's been doing—or even to divest his company of some of its property.

Because of the moral taint associated with any criminal indictment, the antitrusters have often aroused grave resentment by using criminal cases to prosecute business under the vague and general language of the Sherman Act.

Actually, any and every violation of the Sherman Act can be prosecuted by a grand jury indictment—Congress made the Sherman Act a criminal law. But a criminal case requires conclusive proof of guilt, while all the antitrusters need to win a civil case is a preponderance of the evidence.

A government-won conviction in either a criminal case or a civil case can be used as evidence in a private triple damage suit by competitors. Thus, even if a criminal suit is decided on, it may well be that a companion civil suit will also be filed by Justice Dept. or interested parties.

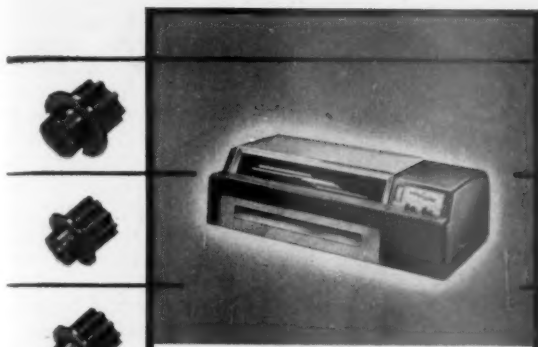
- **Who Makes Decisions**—Hansen gets all the advice he wants. But in the final analysis, it is his decision whether to prosecute a business and whether to file a civil suit or take the case to a grand jury. Once the decision is made, Hansen, Bicks, and Kirkpatrick assign the man who is to act as senior trial attorney in a court case, while the section chief assigns the junior attorneys.

Hansen, like all Antitrust chiefs, keeps the Attorney General informed on all important developments. The trial attorneys run their cases, but Hansen—and Rogers—make any decision on a major shift in strategy, such as to withdraw a case or to change the kind of relief originally demanded.

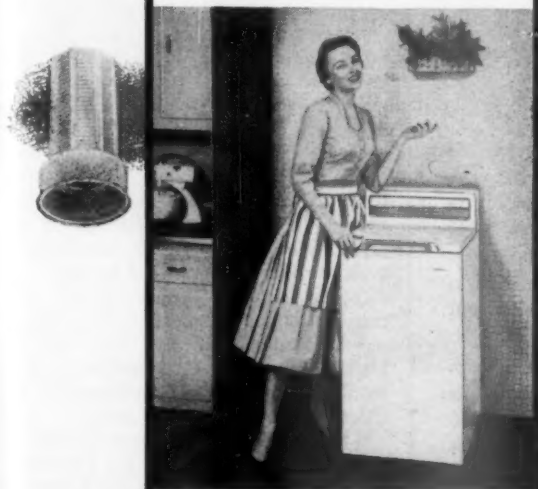
Hansen and his top aides also decide whether or not to negotiate with a company for a consent settlement. Hansen will be in on the first go-around, when basic positions are drawn up. Then, after the details have been worked out, Hansen decides whether to accept the terms.

IV. The Administration's Role

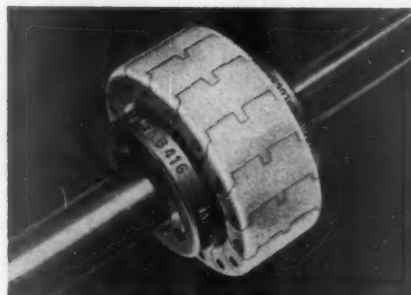
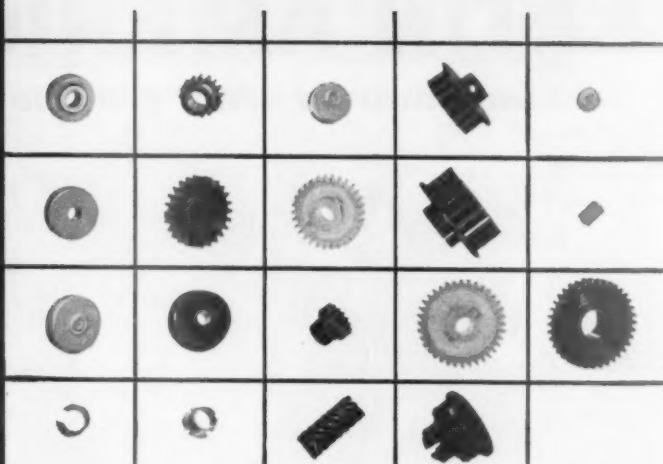
Behind Hansen in all this, of course, stands the Administration—the Attorney General and, eventually, the White



PHOTOCOPIER employs mechanical parts of Du Pont ZYTEL because they are less costly than metal, quieter in operation and require little or no lubrication. (American Photocopy Equipment Company, Evanston, Illinois.)



WATER SOFTENER uses 20 different parts of Du Pont ZYTEL nylon resin. Subjected to brine and turbid water, the parts will not corrode. (Molded by Contour Plastics, Minneapolis, Minnesota, for The Lindsay Company, Chicago, Illinois.)



FLEXIBLE COUPLING made of molded links of ZYTEL, the manufacturer says, outlasts metal chain coupling at least 6 to 1 and costs 20% less to buy and maintain. Coupling is clean, quiet, corrosion-free. (Molded by Berea Plastics Company, Berea, Ohio, for Morse Chain Company, Ithaca, New York.)

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To further stimulate such development, the Latin American republics in '58—a world-wide recession year—programmed 30% more on construction expenditures than in 1957—a record year. Included in estimated 1958 expenditures were 90% more for rail facilities than in 1957, 30% more for airport construction, and an increase of 58% for port works.

Yet production and construction are only part of the story. Although Latin America's 2.3% yearly population growth is the fastest in the world, the increase in per capita income still amounted to 2.4% in 1957.

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House. A case can be stopped at either level, and in the past this has sometimes happened. Under Hansen's regime—since 1956—no case he has wanted to push has been vetoed by his superiors.

The Attorney General is involved to some degree in every case, since he is the one who signs the complaints. In about two-thirds of the cases the involvement is pretty formal. At the initiation of every case, Hansen sends Rogers a lengthy memorandum setting out the facts and the background. In a criminal case, this will be done before a grand jury is asked. In a civil case, a draft of the complaint to be filed will go with the memorandum.

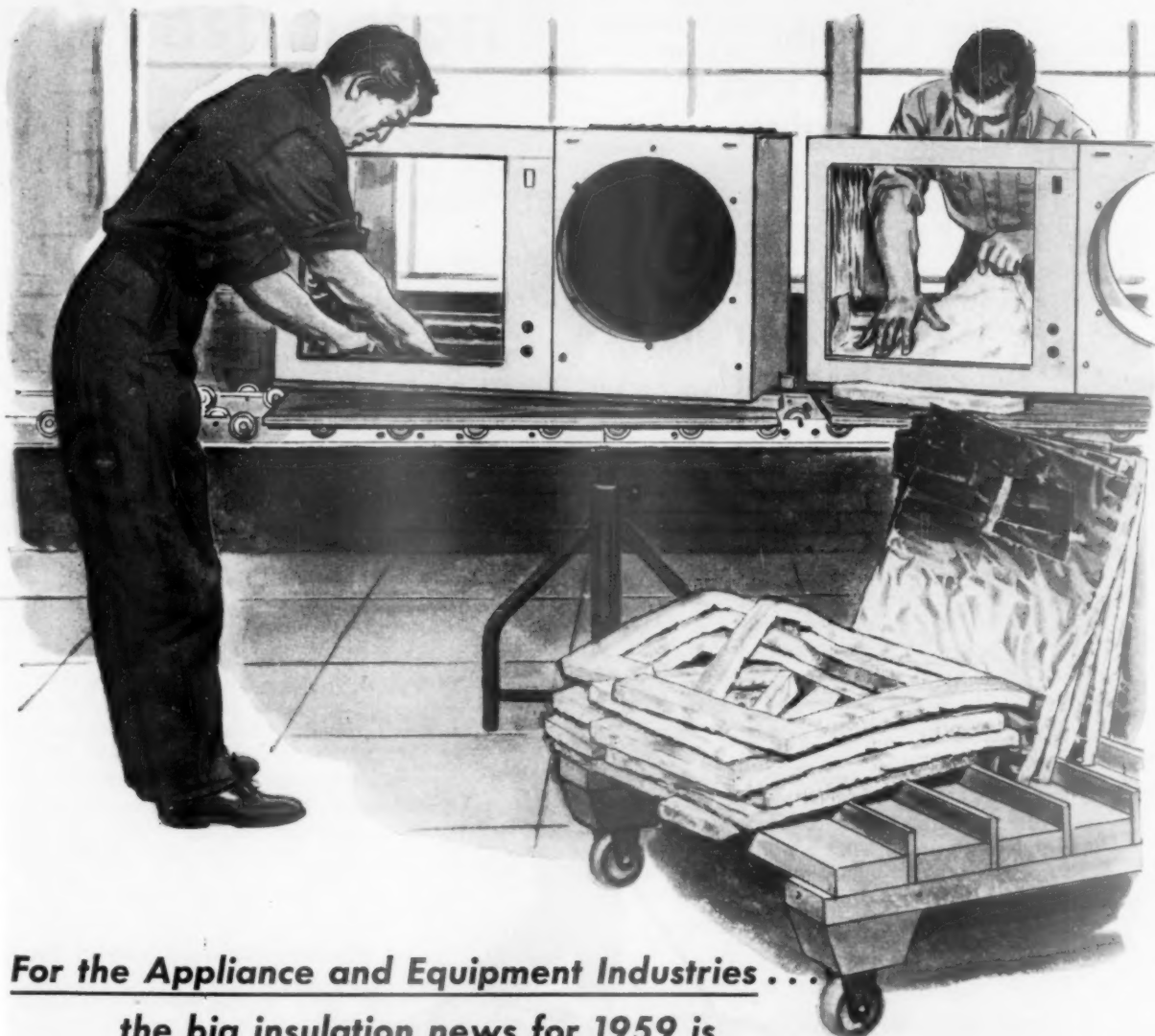
In a routine case, that's all that is required; the documents come back approved. About a third of the cases are complex enough or have wide enough economic or political implications to call for more discussion. Rogers may raise questions or Hansen himself may want to talk it out. In such cases Rogers will sit down for a full-scale conference with Hansen and his staff.

Even after a grand jury investigation has been completed, Hansen will sometimes consult Rogers on the decision he has to make then: whether to go after a criminal indictment, whether the evidence fails to support a criminal indictment but does indicate a civil case can be filed, or whether both a criminal indictment and civil case will be filed. This kind of conference occurs in about one-third of indictments by federal juries in antitrust cases.

The White House involvement is much more formal. Both the President and White House are informed on important cases by the Attorney General. In Hansen's time, he says, the White House has not "interceded" or vetoed a decision to prosecute a case.

• **Vetoes**—This unanimity has not always prevailed in past Administrations. When a case is blocked higher up in an Administration, it rarely becomes public knowledge, and then only in bits and pieces and often years after the events. Staff recommendations approved by the Assistant Attorney General in charge of antitrust have sometimes gathered dust for years before a case has been filed.

For example, it is reported that the suit to separate American Telephone & Telegraph from Western Electric was recommended around 1944; it was 1949 before it was filed. The oil cartel case was first recommended in 1946, was filed only in 1953. And in 1957, Sen. Estes Kefauver tried—unsuccessfully—to get hold of files developed in what he said was an Antitrust Div. investigation of monopolistic practices by U. S. Steel Corp., which had been completed in 1952. Hansen denied his request in 1957, on grounds the "staff paper is currently in use as an aid to both pending litigation and investigation." **END**



For the Appliance and Equipment Industries . . .

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In Washington

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Antitrusters' Stand on "Option Time"

Augurs More Trouble for the Networks

The Justice Dept. has taken another firm antitrust stand with the radio-TV industry. "Option time" practices—by which a station is required to give the networks virtually whatever prime time they demand—"run afoul of the Sherman Act," says chief trustbuster Victor R. Hansen.

The nets claim they have to be able to guarantee an advertiser that a certain number of stations will carry his program. This "stability," they say, benefits the viewer as well by assuring him better programs. The Federal Communications Commission, by a 4-to-3 division, backed option time as being "reasonably necessary" for successful network operation. Hansen replied that whether it's necessary is "beside the point." The Supreme Court, he noted, has said the convenience of those regulated is immaterial in antitrust cases. The networks have already bowed to antitrust pressure by voluntarily abandoning "must buy," which is similar to option time.

The Justice Dept.'s stand apparently indicates more trouble to come for the broadcasters. This is the first action by Justice since the Supreme Court last month gave the department a free hand to move in on network practices and station mergers, regardless of whether they are approved by FCC.

. . .

Private Power Companies Fight Bill

To Finance Expansion of TVA Services

Bond-financing legislation for the Tennessee Valley Authority began what is expected to be an easy trip through Congress this week. The House Public Works Committee held a two-day hearing on its bill (HR-3460), introduced by Rep. Clifford Davis (D-Tenn.), giving one day each to supporters and opponents. Sen. Robert S. Kerr (D-Okla.) has introduced an identical bill (S-931) in the Senate—a copy of the one that passed the Senate in 1957—but no hearings have been scheduled.

Officials of private power companies located on the frontiers of TVA emphasized in last week's hearings that the bill's greatest danger to them would be in their difficulty to obtain financing for new facilities. Harlee Branch, Jr., president of Southern Co., said "the inexorable effect" of TVA bond legislation would be to "put uncertainty in the minds of our investors." Two features of the bill that company spokesmen cited as particularly bad would be (1) lack of Congressional control over TVA operations, and (2) no effective restriction on the TVA service area.

G. O. Wessenauer, TVA's power manager, testified that the bill would permit TVA to expand its service area from 80,000 sq. mi. to 105,000 sq. mi., and he also predicted that the Authority would come back to Con-

gress in about five years to increase the bill's proposed \$750-million bonded debt limit. He estimated that \$750-million would allow TVA to add between 3.5-million kw. and 4-million kw. to its generating capacity, and said that this would be needed to serve TVA's present customers in the next few years. Wessenauer denied that "cheap" power rates had permitted the Authority to take industrial customers away from utilities in other parts of the U.S.

The chance of a Presidential veto of the TVA bill is a growing possibility. Although Pres. Eisenhower has advocated self-financing for TVA, he has insisted on several safeguards in such a bill—and the "safeguards" in the present TVA bills fall short of what he has asked.

. . .

Steel and Auto Price Policies

Castigated by Fed Researcher

The pricing policy of the steel and auto industries "doesn't make economic sense," Ralph Young, director of research for the Federal Reserve Board, told Sen. Estes Kefauver's anti-monopoly subcommittee this week. Young was a witness in Kefauver's marathon probe of pricing.

Young's testimony was similar in approach to recent Fed studies that seek to exonerate monetary and credit policy from blame for inflation, unemployment, and other persistent problems.

The steel industry, Young said, has lately been whipping up demand by "waving a scare flag, saying 'Boys, there will be a strike in three or four months—get in now and get what you can.'" The present level of demand cannot be sustained, he contended. In the auto industry, he added, last year's price increases, imposed in a period of slack demand, are costing sales this year.

. . .

House Group to Make Full-Scale Study

Of Renegotiation Act; Changes Proposed

The House Ways & Means Committee will begin an open investigation of the Renegotiation Act after the Easter recess. The inquiry was authorized last year when Congress extended the controversial law to June 30, but failed to make an extensive study of its operation.

Under the law, the government can recapture from defense contractors profits which the Renegotiation Board finds are "excessive." Defense producers have been demanding that the law be changed to set up a definite yardstick to determine what profits are excessive.

This week, Rep. Cecil R. King (D-Calif.) introduced a bill that reflects some industry proposals. The measure extends renegotiation for two years, with these provisions:

- "A comparison (of defense contractor costs and profits) with the costs and profits of other industries" as a new factor in determining excessive profits.
- A guarantee of "agreed profits" which the Renegotiation Board could not reduce.
- Greater access for contractors to board records pertaining to their cases.

THE MARKETS

Glare Turns on Treasury Market

● For several months now, the Fed and the Treasury have been studying the government securities market.

● The object is to improve the market and to prevent speculative booms such as led to last summer's bust.

● Some new regulations are likely to result, but a return to a supported market seems out of the question.

A major study of the Treasury securities market—the nation's basic financial market—is under way.

The study is being conducted by the U.S. Treasury and the Federal Reserve Board, the two major forces in the market. They have been at work for several months in a basic reappraisal of the ways in which government securities are sold (BW—Nov. 8 '58, p125). This week, they announced that their study, which will be out about mid-year, will contain recommendations aimed at "improving the market's functioning and preventing speculative excesses."

Officials say that the collapse of the government bond market last summer prompted the new study. They blame the collapse largely on a wave of speculative buying. Both Fed and Treasury officials appear to be in favor of initiating some regulations that will damp down speculative fever.

• **Speculation Now**—Both critics and supporters of the Fed feel that speculative activity is a major problem. However, there is a dispute over who is to blame for the speculation. Rep. Wright Patman (D-Tex.), for example, charged that the joint Fed-Treasury study is "a whitewash" being carried out "by the people who have had a major part in the crime."

Right now, there is no speculation in the market. Since the sharp reversal in bond prices last summer, speculators are giving new Treasury issues a wide berth. The result is that the Treasury today is unable to sell long-term bonds in any volume.

• **How to Borrow**—Thus, the joint study will probably explore ways and means of enabling the Treasury to borrow more successfully. Up until the Fed-Treasury accord of 1951, the Treasury had no trouble selling its debt because the Fed stepped in to buy whenever prices threatened to go below its pegs. But under the accord, the Fed withheld its support of the market, let Treasury obligations find their own level.

But this freeing of the market has

not been so successful as the Fed—and the Treasury—had hoped. The market has none of the "depth, breadth, and resiliency" that Fed. Chmn. William McC. Martin claimed would result. As Martin defined it, depth means there are buyers and sellers both above and below current prices, breadth that such orders are in volume, and resiliency that new orders pour in as soon as the market shows signs of a sharp rise or fall.

Dealers claim that these conditions of "DBR" are totally lacking from today's market. Especially since last summer, there have been few buyers or sellers, and even sharp markdowns in price have failed to attract much interest.

• **Restorative Measures**—Just how to resuscitate the long-term market is a difficult question. According to some dealers, it is not speculation but the Treasury's deficit financing policies that are mainly responsible for its crumbling. As one dealer put it: "No one wants to be locked in with long-terms if inflation lies ahead."

But speculation did bring on the collapse of the market. Late in 1957, when the stock market was in the doldrums and the Fed signaled a reversal of its tight money policy by lowering the discount rate from 3½% to 3%, speculators started buying government bonds—on margins of 5% or less. This demand sent bond prices climbing.

The Treasury took advantage of the switch in credit policy to shovel out big batches of long-term bonds. This stretching-out process reached a climax in June, 1958, when it offered an intermediate issue in exchange for some maturing securities. It expected that investors would take up about \$3-billion of the new intermediates; instead, it was overwhelmed with some \$7.4-billion in subscriptions.

• **Stampede**—This was clearly a sign of abnormal activity in the bond market. A great many individuals bought long-term treasuries; so did many banks and corporations. When the economy showed signs of turning up and press

stories inspired by the Fed reported a tightening up of credit, there was a rush to unload.

The Treasury tried to stem the tide by taking the unprecedented step of buying in part of its new issue for premature retirement. Then the Fed got into the act by abandoning its cherished "bills only" policy (BW—Jul. 26 '58, p23). It started to support bond prices, then pulled out when it felt that there was no stopping the stampede of sellers.

Since the debacle, there have been a number of developments. The New York Stock Exchange disciplined one member firm, Garvin, Bantel & Co., for failing to observe the 5% margin rule that the Exchange itself imposes (BW—Sep. 27 '58, p45). The firm was also charged with making questionable repurchase agreements—RPs. These are simply contracts under which the seller of a security agrees to buy it back within a specific time and at a specific price, plus interest.

• **Subject Matter**—The details of RP arrangements, among other things, will be investigated in the new study. Next week, questionnaires will be mailed out to banks, corporations, and dealers asking about RPs and other deals. It is expected that the study will center on three main areas:

• Whether to organize the government market like the NYSE and have the dealers police themselves.

• Whether to set margin requirements.

• How to develop more adequate means for determining credit facilities for dealers in governments, including more frequent use of Fed-dealer RP agreements.

As it now stands, 17 major dealers—five banks and 12 non-banks—regularly "make" markets in government securities (BW—Jul. 12 '58, p100). Some dealers think the Treasury and Fed ought to find out why so few are in the field.

• **Prognosis**—It is probable that some policing arrangements will be recommended, along with stiffer margin requirements, at least for individuals or firms that are not regularly in the market. But certainly, neither the Fed nor the Treasury will suggest any return to a supported market. For Martin, the "bills only" policy is a matter of doctrine that he has only abandoned in the most acute emergencies. And the Treasury, under both George W. Humphrey and Robert B. Anderson, has been in favor of the "free market" concept that Martin has espoused. **END**

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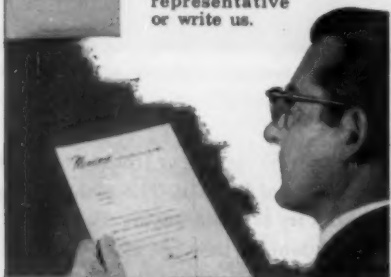
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Big Buyers Shy From Commons

Mainly because of high price-earnings ratios and suspicions that the stock market may be in for some bumps, institutional investors are showing caution on equities.

A subtle but significant shift in investment action is brewing at the policy tables of the nation's institutional investors. It's a move to lighten up on the purchase of equities—and if the trend continues, it could diminish some of the stock market's breadth and vigor.

As yet, the shift has not reached any great proportions. The majority of institutions is still pursuing an aggressive policy toward equities. And there's no sign that a wholesale exit from common stocks is in sight.

But there's no doubt that an increasing number of institutions are easing up. Some investment managers have trimmed equity purchases since the turn of the year. And the trend has been stepped up ever since the popular Dow-Jones industrial average broke through the 600 barrier.

• **Stabilizer**—The possible impact of this shift is clear. Up to now, big institutions have acted as built-in stabilizers when the market dipped; by the same token, their purchases have accelerated any upward movement in stock prices. For example, stock prices in 1958 climbed rather insignificantly from their 1957 lows until the big institutions moved aggressively into equity purchases. Then the stock market went off on its spree.

Whether the market loses its pep will depend on how widespread the current trend becomes. But outside of one big spurt this year, the market has been trading in a thin range. And the list of big stock buyers shifting policy is impressive.

For instance, two banks with a large stake in trust business have lightened up on the proportion of equities in their trust accounts. A number of life insurance companies have eased up, too, partly because they're sinking more cash into tax-exempt municipal bonds as a protection against the higher tax bills they face this year.

A number of mutual funds also are shifting. True, the overwhelming majority of all-common stock funds, dedicated to investment in equities, continues to be 90% or more invested in commons.

• **Greater Caution**—But the balanced funds, which seek stability through a mixture of bonds and stocks, are following a more cautious policy. One fund says it's putting "only 20% to 30% of its new cash into commons, instead of the 60% or so it was invest-

ing several months ago." Another says it has "cut back its equity ratio by about 4% in the past two months." Still a third admits that it's been a net seller of stocks in the past few weeks.

Almost as important as these changes are shifts in the types of securities being purchased. Many big investors report that income-producing stocks are now more in demand. A handful of open-end funds, for instance, are concentrating more on utilities than before.

• **Alternatives**—Other institutions say they're cooling on so-called "growth" stocks whose earnings have been discounted for years ahead. They're limiting purchases to stocks that should show a definite recovery in earning power—and stock prices—this year.

Those institutions easing out equities are not necessarily sinking their excess funds into long-term bonds. Most are investing any excess cash in the short-term market, where yields are rapidly rising.

• **High Prices**—What brought this baby rebellion against equities about? That's a tough question. Most institutions feel no great faith that the business recovery will speed up, yet few think the business picture has been dulled any. What it boils down to, in sum, is that institutions are beginning to think that the present prices of some stocks are out of line with the earnings outlook.

Some months ago, they were willing to disregard high price-earnings ratios. Now, they think they are important. They say privately that the market is in for some big bumps—but not a major decline—and they don't want to be up-ended.

What's more, most institutions don't aim to pinpoint a market's peak; they're content to get out with profits—even in a rising market—when they spot danger signals ahead.

You don't have to go too far to find one of the main things that weighs on them—the government's toughening credit policy. Last week's hike in the discount rate to 3% from 2½% is the latest indication that the Federal Reserve Board aims to curb inflation—in business and in stock prices. And big investors see in tighter credit a two-way squeeze on stock prices:

• As yields rise in the bond market, common stock yields look that much less attractive in comparison.

• If credit curbs slow down business expansion, corporate earnings probably will be lower. **END**



Three brothers— and their marvelous sausage

(A true story)

IT BEGAN 86 YEARS AGO, when a 14-year-old Bavarian boy became an American. He started as an apprentice in a Detroit meat packing house; worked there 3 years. But in 1876 he came to Chicago. He liked it immediately; he sensed opportunity. So he wrote to a brother in Europe: "Learn to make good sausage. Then, come to Chicago!"

The brother did both. Then, the two men opened a small meat market in the city. Their specialty: fine Bavarian sausage. Later a third brother arrived from the old country to keep the books for the young enterprise.

It went well. So well that the owner

of the store refused to renew the 5-year lease, hoping to take over for himself the business the brothers had built up. It was time for decision. Using savings, and inheritance and a bank loan, they erected a 2-story building two blocks away. And it came to be the heart of a great meat processing plant.

Through the years the family built one of the finest operations known. Today, its plants extend coast to coast; it is now a multi-million-dollar business.

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In the Markets

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Hike in Discount Rate Contributes To Churning on the Stock Market

The stock market backed and filled this week largely in response to the Federal Reserve Board's action in raising the discount rate. Brokers report that the general public has lost none of its faith in equities, but they speak, too, of big stock buyers waiting for a definite indication of a new trend before they move more into commons.

Most individual investors seem to have shrugged off the Fed's signal of tighter credit. But many institutional investors consider that the Fed is trying to put a damper on stock prices by making bond yields so attractive that investors would be inclined to shift out of the low-yielding stock market.

One investment counselor, Anthony Gaubis, points out that in the past upward revisions in the discount rate have been a stumbling block for the market when stocks were selling at high price-earnings ratios—as they are now. In such cases, he adds, any extensions of stock price rises have been small.

Still, there appears to be no major decline in sight. As brokers see it, the business outlook is too bright to warrant any shifts to pessimism.

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Fed's Boost of the Discount Rate Rocks Bonds Back on Their Heels

The capital markets are still reacting this week to the Federal Reserve's surprise hike in the discount rate (page 200) from 2½ to 3%—the first rise since November. In the wake of the increase, government bond prices tumbled as much as 1½ points, to put yields back up over 4%, and 91-day Treasury bills at this week's auction shot up to 3.06%, the highest since mid-December.

Corporate bond prices were also cut. The Wall Street syndicate handling a \$10-million Duquesne Light gilt-edged bond deal was forced to break up; as prices fell, the yields on this issue climbed from 4.25% to 4.31%. Another syndicate, offering \$50-million in Illinois Bell Telephone Co. bonds to yield 4.32%, estimates two-thirds of the issue is unsold.

Following the shake-out, there was a partial rally in the bond markets. But the only real strength in investor demand this week was for new state and local government bond issues. With many syndicates reporting, one-half to three-quarters of the large bond issues sold to investors the first day. Still, yields are up—on outstanding issues in the municipal market, they are now about 3½% tax-free.

Even higher rates are probable because of new demand. The volume of new financing coming to market is building up rapidly. The 30-day total for municipal issues is up from \$348-million to \$486-million, while the

March corporate backlog is now \$460-million, twice what it was a week ago. The total corporate financing announced so far for 1959 is again over \$1-billion.

The Federal Reserve is keeping a tight rein on bank reserves available as a basis for lending and investment. The latest figures show a deficit of \$177-million in these reserves—the highest this year. While this may be higher than the Fed's current target level, it is clear that the money managers prefer to err on the side of greater restraint. After the discount rate hike, commercial banks began exploring the possibilities of raising the prime rate—now at 4%.

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State Court Steers Investors Diversified Control Back to Alleghany Corp.

A New York state court this week handed down a decision that, in effect, gives voting control of Investors Diversified Services, Inc., to Alleghany Corp. IDS, a huge investment management company, is cherished by Alleghany as the richest of its Big Four holdings—New York Central RR, Missouri Pacific RR, and Webb & Knapp are the others (BW—Feb. 14 '59, p108).

In 1955, Alleghany swapped 130,000 of its voting shares in IDS for a like number of nonvoting shares in a complicated deal with the Murchison brothers of Texas that ended in control of the New York Central for the late Robert R. Young. However, minority stockholders of Alleghany opposed the transaction as a misuse of assets and demanded return of voting control in IDS.

This was the case the New York court decided, but the decision won't be effective until an outcome is reached in other cases that are pending in U.S. courts. After the decision was announced, however, Alleghany rose in the stock market to 11½, a postwar high.

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The Markets Briefs

The American Stock Exchange is planning an electronic quotation system. The system, which would be installed in about one year at a cost of more than \$1-million, would report a stock's open, high, low, last, and bid and asked, as well as its daily net change and trading volume. The present manual system gives only the last trading price and bid and asked prices. . . . ASE also looks as if it is going along with the reduced commissions recently voted by New York Stock Exchange members. Its members will vote, too, on cutting fees about 2%, as suggested by SEC.

The Securities & Exchange Commission has retreated in its crackdown on evasion of U.S. securities laws through use of foreign "code numbered accounts." Last fall, SEC proposed a new rule that would have required brokers to report all transactions from abroad that involved—within a six-month period—\$50,000 or more than 1% of a company's stock (BW—Sep. 20 '58, p142). Now, because of the howl of protests from brokers over the extra paper work, the SEC says it will be satisfied with monthly summaries of foreign transactions in each stock.

**WAGNER PROTECTED TRANSFORMERS
USED IN UNIQUE DISTRIBUTION SYSTEM:**



Willis Lipscomb, Consulting Electrical Engineer, and Joachim E. Liebmann, Harbor Engineer, examine emergency overload feature on a 75 Kva, 3 phase Wagner Protected Transformer. The other Wagner Transformers are each 50 Kva, single phase.

POWER for the Port of San Diego



Keeping pace with the rapid industrial growth and increased shipping needs of the Southwest has meant a tremendous construction job for the Port of San Diego . . . now the third largest port on the West Coast.

The largest, most modern of San Diego's port facilities is the new 10th Avenue Terminal, capable of handling 9 large ocean going vessels at one time.

Facilities like this need plenty of dependable electric power. To distribute this power, the 10th Avenue Terminal has a 12,000 volt distribution system powered by Wagner Protected Subway Transformers. Each transformer has a main secondary breaker to clear any overload or fault. The primary side of the transformer has an internal weak link to protect the line. Each transformer vault has two service lines, a preferred and an alternate, connected to each transformer through a throw-over switch. The system is unique, safe, and economical. Wagner Protected Transformers make it possible to eliminate expensive submersible primary fuses.

Consult your nearby Wagner Sales Engineer about modernizing your power distribution system. There are Wagner Branches in 32 principal cities.

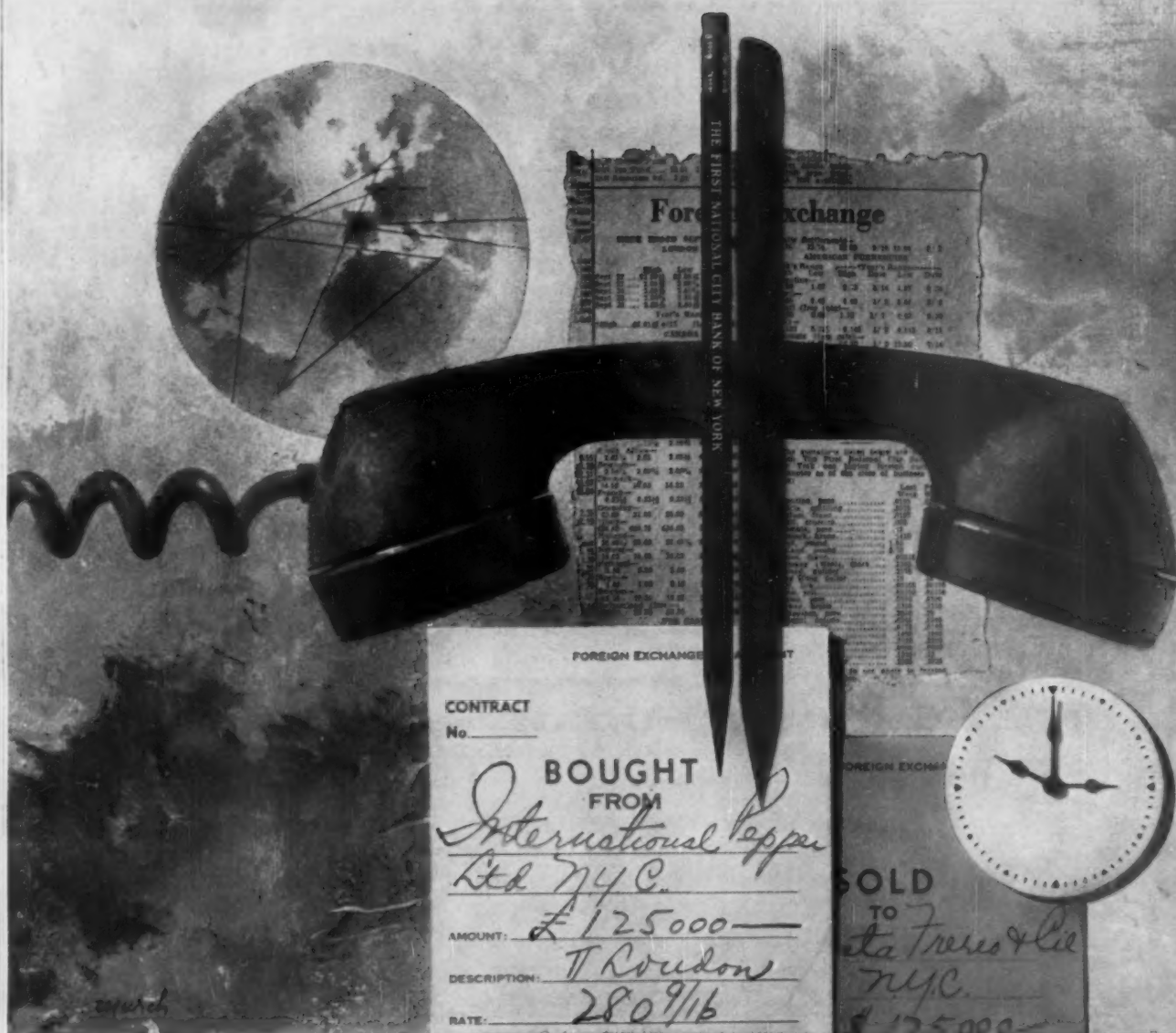
Consulting Electrical Engineer, W. L. Lipscomb, San Diego, Calif. Electrical Contractor, Standard Electric Contracting, Inc., Chula Vista, Calif.

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WT59-1



Things are different overseas today. Even the "hard" currencies fluctuate in value, some as much as 6% during a year, and the "soft" currencies much more. So timing can be an important factor in the complicated business of dealing in foreign exchange. It's worth getting the advice of the man who can do *more* for you overseas, your FNCB banker.

**The FIRST
NATIONAL CITY BANK**
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can do more for you overseas**

Foreign Exchange Department is in daily communication by telephone, telegraph and cable with all important world trading centers. It is directed by two senior officers, with a total experience of 75 years, who are available for consultation.

World Wide Branch Coverage. 75 in 26 countries.

Long Experience. Branches date back to 1902.

Large Staff. 6,000 skilled Citibankers overseas.

Long-Standing Relationships with correspondent banks in every important free-world city.

On Call at Head Office, or thru any FNCB Branch or correspondent, are 75 officers, with nearly 1,000 years' service overseas, and a staff of 1,200, handling 47,000 overseas items daily.

First in World Wide Banking

PERSONAL BUSINESS

BUSINESS WEEK

MAR. 14, 1959



Many taxpayers—often higher bracket people—overpay the government by millions of dollars every year because they fail to take full advantage of tax deductions.

As an aid in preparing your Form 1040, here's a brief rundown on some of the most frequently overlooked deductible items, particularly those that would likely apply to an executive.

- **Acquiring and protecting income.** You can deduct the cost of professional advice to help safeguard or expand your income. This includes investment counseling, and the cost of investment "services" and similar publications. Estate-planning and tax-planning expenses are also deductible, as are legal fees paid to enforce or defend your rights where current income or investment property is at stake.

One of the most frequently ignored items is the cost of a necessary trip away from home, to inspect income-producing property or to confer with a professional adviser about the status of investments. But note: You can't deduct the cost of attending a stockholders' meeting.

One minor item is the cost of a safety deposit box; also you can deduct for depreciation on floor or wall safes at home, when you use them to protect stocks, bonds, deeds to rental property, etc.

If you're shopping around on your own hook for a new business enterprise—sideline or not—you may be able to deduct the expenses involved in the hunt—but only if it actually results in a new venture for profit.

These expenses include such items as legal investigation, auditing of the new company's books, architects' appraisal fees, expenses of travel.

- **Carrying on business at home.** If you have space set aside for a "home office," you may be able to deduct a proportion of household expenses, including house depreciation, maintenance, insurance, heat, and light.

In addition, you can deduct depreciation on home-office furniture and equipment, part of the maid's pay (allocated to maintenance of your "office"), business telephone calls, and business literature used at home.

Here the essential point is that you actually set aside space for business use, and can show that this is a bona fide home office—not simply your private library or den.

The formula for the deductions is simple. Take house depreciation. The government has tables giving the depreciation-rate for any home—from 2½% to 4% of cost, depending on construction and other factors.

You take the total depreciation for the house, then of this amount take as a deduction whatever part represents the fraction of floor space used for your office. You use the space-formula for the other deductions, such as maid's pay and heat.

Business entertaining at home also may add up to a surprisingly respectable deduction—one that many executives tend to overlook. Here, in addition to food, drinks, and servants' pay, you can deduct depreciation of bar, furniture, stove, etc., where you have a special room for certain types of entertaining, like a rathskeller; telephone calls related to business entertaining, and house depreciation (reasonably allocated).

- **Donating to charity.** When you compute your contribution deduction, don't forget the cost of attending conventions or conferences of charitable groups. But remember, you must have been a delegate—not just a casual

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

MAR. 14, 1959

visitor. Also, remember that the cost of operating your car on behalf of a charity is deductible—gas, oil, depreciation, chauffeur, and so on.

• **Casualty losses.** Here the IRS is more liberal than you might imagine. You can deduct losses from fire, flood, storm, theft, or similar forces beyond your control—and contrary to the belief of many people, you can get these deductions even though your own negligence was to blame for the loss. You need records, of course, to prove these losses—repair bills, estimates, police reports, etc.—in the event your tax return is subject to audit.

• **Medical deductions.** Here are some items showing the broad range of such deductions, some of them easily overlooked:

Canes, elastic hosiery, eyeglasses, hearing aids, orthopedic shoes, trusses, and surgical supports.

Air-conditioning equipment (if prescribed by a physician), casts and splints, reclining chairs (if prescribed), special mattresses and stair-seat elevators (in some cases), wheel chairs, whirlpool baths.

Cost of special care and schooling for physically or mentally retarded children; rest home expenses, if medical treatment is provided; "health club" charges, where steam baths, etc., are taken under doctor's orders.

Warning: Recent cases indicate that vitamins are deductible only when prescribed by a doctor to cure an ailment.

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There's at least one tax rule in the realm of exemptions that is frequently misunderstood. If you have a son in college, you may still claim him as an exemption, even though he earns a lot more than \$600 a year during summer vacation. The requirement: that you contribute more than half of his total support for the year.

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Estate planning department: What is the best way to leave property to children? Or to use a living trust? What about joint ownership? How does the marital deduction work? These are a few of the questions given clear-cut, sensible answers in a new book, *What Women Want to Know About Wills*, by Earl S. MacNeill (Harper, \$3.50). This informal guide for women tells much of what a husband should know about the art of estate planning.

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Silver Hill Foundation, a highly regarded non-profit hospital outside New Canaan, Conn., is offering a special "emotional check-up for executives." The examination—which may result in a recommended program for living, and possibly therapy—takes at least six days (\$500).

—•—

Grass substitutes: For problem spots about your grounds, where grass won't thrive, other ground covers may be the answer.

Here are several that grow quickly, in sun or shade, and in any soil: English ivy (popular, does best in moist loam); Aaron's-beard or St.-John's-wort (grows to 12 in., not hardy in a severe climate); Henry honeysuckle (makes a thick tangle, climbs anything); Japanese spurge (six to eight in., very hardy); gold moss stonecrop (creeping two-in. mat, fine for rocks and walls); periwinkle or myrtle (six in., good for preventing erosion).



USCOLITE PLASTIC PIPE



Laying 6" Uscolite pipe in Pine Ridge Golf Course. Despite its size, this 40' length is easily handled by three men.



Note the flexibility and easy handling of Uscolite pipe, being placed in a 3-ft. ditch.



Mr. Usco says:

The grass is always greener with Uscolite Pipe

Take a look at Baltimore's lush new 6600-yard municipal golf course, Pine Ridge. Its beautiful greenery is nourished by a special watering system which flows through Uscolite® plastic pipe. Over 19,000 feet of Uscolite pipe (in sizes from 1/2" to 6" i.d.) spread into an underground network running to tees, greens, clubhouse and certain fairway locations.

Cost-conscious Baltimore officials selected Uscolite because:

- Its smoother finish offers less friction-resistance than metal, hence, a smaller i.d. (and less expensive) pipe is used.
- Uscolite's light weight makes it easier and quicker to install with less manpower; installation costs cut in half.

- Pipe's flexibility means it can be curved without fittings.
- Solvent-weld fittings cut assembly time in half.
- Uscolite has high impact resistance and is absolutely impervious to corrosion by soil or water; scale will not accumulate and reduce flow.

Uscolite—the complete line of plastic pipe in America—carries the National Sanitation Foundation Seal of Approval.

When you think of plastic, think of your "U.S." Distributor. He's your best on-the-spot source of technical aid, quick delivery and quality plastic pipe and fittings.



Joining Uscolite pipe with UscoWeld® solvent-weld fittings. Each joint takes about 90 seconds to make up and is locked for life.



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United States Rubber

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*Patent applied for

The Arithmetic of Materials Handling



Fuller pneumatically conveys drilling mud directly into oil rig bins, from specially-fitted Bourg Mud & Chemical Co. supply ship. Ship carries 250 tons of mud, delivers at a rate of 50 tons an hour.

Sea-Going Fuller Pneumatic Conveying System Cuts Time and Cost of Vital Drilling-Mud Deliveries

The Bourg Mud & Chemical Co., Inc., of Lockport, La., is making off-shore deliveries of drilling mud by advanced Fuller pneumatic systems.

The dry mud is automatically pumped aboard oil rigs from a Fuller equipped cargo ship at a rate of 50 tons an hour—one man replacing large crews handling 100-pound sacks in cargo-nets. Previously, bag handling in high seas had been either dangerous or impossible. The highly flexible bulk-handling system now operates safely and efficiently at all times.

Self-emptying hoppers designed and built by Delta Tank Manufacturing Company installed into the Bourg ship are fitted with F-H Airslide® fluidizing

gravity conveyors. A 6-inch Fuller-Kinyon pump transfers the aerated material to bins aboard the rig—over distances up to 300 feet. Air pressure is supplied by a diesel-driven Fuller single-stage vane-type rotary compressor.

Here is a good example of Fuller's engineering experience and wide range of equipment combining to solve your materials handling problem. If you handle large volumes of dry bulk granular materials, why not investigate a simple, efficient Fuller pneumatic conveying system? For details, write or call Fuller today outlining your problem.



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In Research

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New Oral Contraceptive Tablet Will Be Mass-Tested in Far East

An oral contraceptive tablet said to be more effective over a wider group than those under test in Puerto Rico and Japan (BW—Mar.8'58,p36) was announced at the Sixth International Planned Parenthood Federation Conference in New Delhi. The claim was made by Dr. Alejandro Zaffroni, executive vice-president of Syntex Corp. of Mexico City, who was invited to India to discuss fertility control in overpopulated areas.

Like its predecessors, the new tablet is a modified progestational hormone. Taken daily, it prevents ovulation. Still to be determined are possible side effects from its prolonged use.

On his return from the conference, Dr. Zaffroni will visit Bangkok, Cambodia, South Vietnam, Hong Kong, and Japan. He plans to initiate and expand testing centers in some of these countries for the new synthetic hormone as a part of the five-year clinical study set up by Syntex in 1955.

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Scientists See Computers That Will Declare War, Decide Discount Rate

There seems to be no limit to the possibilities that scientists see for computers. At last week's Western Joint Computer Conference in San Francisco, for example, these were among the future uses that were suggested:

A maker of high policy decisions. Louis Sutro of MIT advocated development of a computer that could assume the decision-making duties of the President of the U. S. if he was not immediately available when an aggressor nation threatened an attack.

Sutro said a computer that contained information on all possible countermeasures could decide whether or not the U.S. should resist, and when, where, and how. It would save precious minutes of conferences among military leaders at such a time.

An automatic translator. William F. Whitmore, Navy scientist, is looking for a computer-equipped radio into which military orders could be spoken in English and heard thousands of miles away in the native tongue of our allies. The first step, he said, would be to study the minimum basic vocabulary to be incorporated in the computer section of the device.

A solver of economic and medical problems. Jerome Rothstein of Edgerton, Germeshausen & Grier, Inc., of Boston, suggested that continuous flow of information to the Federal Reserve Board, for example, could eliminate the usual time lag in decisions to raise or lower the discount rate. And if computers could be armed with some 10,000 biological characteristics of individuals, cor-

MORE NEWS ABOUT RESEARCH ON:

- P. 183—Red China's Beehive of Science
- P. 195—Waste Disposal in the Space Age

relations could be drawn perhaps to gauge people's predisposition to cancer and heart disease, and the riddle of psychosomatic illness might be solved.

• • •

Moon Rocket Used Spin-Launcher With Tolerance of Less Than a Hair

Hair's breadth precision featured the spin-launcher used in the launching of the U.S. Army's "deep space" probe last week (BW—Mar.7'59,p29). The spin-launcher, developed by researchers at the Army Ordnance Missile Command, was able to give almost perfect aerodynamic stability to the upper stages of the big Juno II rocket that was used to launch the space probe.

Mounted just ahead of the modified Jupiter IRBM that formed the first stage of Juno II, the spin-launcher was started whirling by electric motors when the big rocket began to blast off. Fabrication of it was handled with the greatest of care in order to prevent any mistake in the trajectory of the missile's three upper stages.

Handling the spin-launcher's fabrication was Reynolds Metals Co. Tolerances were kept at the barest minimum: The top of the launcher was not more than a thickness of two human hairs from perfect roundness; other parts maintained a tolerance of less than half the thickness of a human hair.

Unlike the Jupiter-C, where a spin-launcher was clearly visible, the spin-launcher on the Juno II was hidden inside the nose section for decreased air resistance during the rocket's flight through the earth's atmosphere.

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Step Toward New Form of Penicillin That Will Attack Resistant Bacteria

A team of British doctors announced over the weekend that they had isolated the basic substance of the penicillin molecule—the first step in developing new forms of penicillin that can attack bacteria that are now resistant to antibiotics.

The substance, chemically known as 6-amino penicillanic acid, is believed to be the parent of the five natural forms of penicillin produced by fermentation.

There is a growing list of bacteria that, through mutation changes, can no longer be attacked by the standard fermentation-grown penicillin. New forms of penicillin that would fight these bacteria would probably also attack the staphylococcus group of micro-organisms.

Ernest B. Chain, leader of the research team that made the discovery at the Beecham Research Laboratories at Brookham Park, Surrey, says that virtually every U.S. pharmaceutical company producing penicillin has bid for a chance to collaborate with Beecham Laboratories in research and development of the new substance.

FITS FLUSH- LOOKS GREAT!

*New
Westinghouse
"Wall Line" Water Cooler
ends unsightly
plumbing, fits flush to wall,
saves space!*

TAKE A LOOK AT THE NEW LOOK IN COOLERS!
The slimmer, trimmer Westinghouse "Wall Line" is the first water cooler that fits flush to the wall—because all plumbing's inside the cabinet! Only 12½ inches deep, it protrudes 30% less than other water coolers with exposed plumbing. Find out more about the new Westinghouse "Wall Line" Water Cooler—MAIL COUPON NOW.

NOTE TO PLUMBING ENGINEERS: Thanks to simplified plumbing, the "Wall Line" installs far easier, faster, at less cost. And since all plumbing is inside the cabinet, it's ideal for "island" installations, too.

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BUSI



AGE OLD CONSTRUCTION METHODS rush building for scientific university of Lanchow, near Tibet's towering mountains.

Red China's Beehive of Science

Hundreds of thousands of scientists are working and teaching in a massive effort to catch up with the leaders of the world.

Sophisticated scientific shrewdness curiously mixed with naive handling of trained personnel: That's the impression gleaned by the few Westerners who have had a close-up look at the scientific community in Communist China today.

Scientific observers—such as Dr. J. Tuzo Wilson, head of the Geology Dept. at the University of Toronto and president of the International Union of Geology & Geophysics—have come away impressed by the determination of the Red Chinese to raise the quality and quantity of their science.

What's more, they have been surprised by the weight given to basic rather than applied research. Every one of the 50 institutes under the Academia Sinica—Red China's Academy of Science—is doing fundamental research,

while university researchers also are concentrating largely on basic research problems. What applied work there is falls largely on the government's scientific ministries, but these agencies employ far fewer scientists than the Academia. Results of the fundamental work are not always up to Western standards, but there is evidence they soon will be.

- **Big Proportion**—The Western observers find far-spreading signs of the power behind China's drive to catch up with the world's scientific leaders. A good two-thirds of the 480,000 students in Red China's colleges are taking courses in science and mathematics. Of course, 320,000 fledgling scientists are a drop in the 650-million-person bucket of China, but it's a lot of scientists, too.

Geographically, the spread is marked. Big scientific institutes are being built even in the once semi-isolated upper reaches of the Yellow River valley; their laboratory facilities are well-maintained and up to Western standards.

- **Reactor**—For atomic research, there

is a 7,000-kw. nuclear reactor—the largest in Asia—while a small 25-million-electron-volt cyclotron is being built. Hundreds of chemistry labs are doing concentrated work on everything from the basic mysteries of solid state physics and the rare earths to advanced biological work on hormones and enzymes. There's a major seismological project centered on the causes and nature of earthquakes. A big group is studying the qualities of germanium, gallium, and indium as materials in transistors. In Peking, the Central Geophysical Observatory has a new solar observatory and apparatus to study cosmic rays.

All over the country, hundreds of thousands of scientists are engaged in diversified research, in such fields as fibers, petroleum engineering, electronics, electrical engineering, hydrobiology.

To grasp the scope and method of the attempt to blanket all fields, consider this item: The Institute of Geological Prospecting, a teaching unit of the Ministry of Geology, has 6,000 stu-



CHINESE LABS mix equipment from the West and the Iron Curtain. Telescope is from East Germany.

dents, a faculty of 600, a five-year science course, and departments covering geological surveys, prospecting for minerals and for oil-natural gas, geophysical exploration, hydraulic and engineering geology, and mining geology. A sister institute under the same ministry has just finished mapping most of China, excluding Tibet, on a one-millionth scale. A third institute, this one under the Academia, is concentrating on such fundamental aspects of geology as radioactivity, and the qualities of the little-known metals.

• **Meteorology**—Other figures show the momentum of China's scientific drive. In 1935, China proper had only 50 meteorological stations, and two seismology stations, one in Shanghai, the other in Nanking. Today, 1,500 meteorological and 30 seismological stations dot the country.

On his tour last summer, Toronto's Dr. Wilson inspected three of the seismological stations, and found them well planned and well manned. He also found them surprisingly un-Russian in appearance. The Chinese seem to be as selective in the adaptation of Russian ideas and methods in science as in other fields (BW-Mar. 7 '59, p98). If Western methods fit in better, the Chinese use them.

• **Lab Equipment**—You find this Chinese effort to take the best from both sides of the Iron Curtain in their choice of laboratory equipment. The

simpler stuff—such things as voltmeters and ammeters—are generally made in China. Bottles of chemical reagents always bear Chinese manufacturers' labels.

Such optical equipment as microscopes and polarimeters usually comes from East Germany and Czechoslovakia, as do the larger telescopes (picture, left). But spectrographs and X-ray gear may be either Russian or Japanese; the more complicated electronic devices are apparently from Hungary or Britain. At the Geology Institute, Wilson saw a Geiger counter made by the Cyclotron Specialties Co., of California.

Generally, the U. S. and British equipment found in China is of an older vintage, though. The Communists apparently have trouble getting it now.

One oddity to the Western eye is the absolute uniformity of the equipment to be found in a multiplicity of Chinese labs. It's uniformly good, too; perhaps not up to the very best in the U. S. but a lot better than much that can be found in many of our labs.

What the Chinese scientist can't find or buy, he makes. Drilling machines and lathes are in extremely short supply. One lab visited by Wilson in the remote interior took a month off from its usual work to build 30 lathes needed for expanded research.

• **The Curriculum**—The University of Peking is the top exhibit in China's



COMPULSORY EXERCISE comes twice a day, interrupting all studies. These Peking science students prepare own basketball court.



STEPS IN THE RACE TO OUTER SPACE

Lunar Unicycle

This 30-foot high Unicycle is designed for preliminary exploration of the Moon, once a base camp has been established. It's entirely constructed of inflated, rubberized fabric, with the exception of strengthening members, hatches and a few other items of equipment. Gyros stabilize and steer the vehicle; electric motors furnish the driving power.

Electricity for the motors and instrumentation comes from solar batteries mounted in the "parasol". The cleated, rotating wheel upon which the Unicycle travels is made of inflated tubes. A spare

wheel, carried around the body, acts as a bumper in traversing narrow defiles. Built in two sections, these wheels are assembled by belt-lacing type fasteners.

The upper level, the navigating and communications deck, is ringed with recording and surveying instruments. Living quarters make up a middle deck and below is the hold with supplies, spacesuits, oxygen equipment and spare apparatus, needed for survival.

In the background, two of the expedition's ferry ships are seen; one landing, one unloading in the bright Earthlight.

Inertial navigation systems will play an increasing role in the exploration of outer space. **ARMA**, now providing such systems for the Air Force ATLAS and TITAN ICBM's, will be in the vanguard of the race to outer space. **ARMA** . . . Garden City, New York. A Division of American Bosch Arma Corporation.

AMERICAN BOSCH ARMA CORPORATION

Plenty of room to EXPAND



As we all know, the territory shown on the map always has been a tremendous source of agricultural products . . . of raw materials for processing and manufacturing.

Today, due to its growth in population and wealth it has assumed new importance as a consumer market.

This emphasizes the need for dependable, near-at-hand rail service . . . not only to transport raw materials but also to act as a carrier for finished products to distribution points within and beyond the western states area.

This is the freight job that Union Pacific is well equipped to handle, in addition to providing modern passenger facilities.

Yes, there's plenty of room for industrial expansion in the "Union Pacific West." For further information contact your nearest U.P. representative or get in direct touch with—

**INDUSTRIAL
DEVELOPMENT
DEPARTMENT**
UNION PACIFIC
Railroad

OMAHA 2, NEBRASKA



"... at one time all Chinese students had to study Russian. Now, it's optional ..."

STORY starts on p. 183

scientific training. Its enrollment is the largest, despite impressive new halls of scientific learning being built at places like Lanchow and Sian. Peking has 10,000 science undergraduates, each carrying 26 hours a week of lecture and lab—including math—and two hours of political philosophy. In the whole Peking area, Wilson estimates there are some 150,000 scientists and science students.

The weekly schedule is significant of the Chinese willingness to drop Russian methods that don't work for them. Up to a year or so ago, the Chinese like the Russians rammed a science course into four years, at a 35-hour-a-week pace. But students in droves came down with ulcers, so the Chinese cut the hours and extended the course to five years, which essentially is the old German system.

At one time, all Chinese science students had to study Russian; now, it's optional and no more favored than English to meet the foreign language requirement. Even the Chinese form of the Periodic Chart—the table of elements common to the labs of the whole world—has symbols in Chinese and English—but not Russian.

- **Filling the Pipeline**—The government is working hard to increase its high school system, in order to keep its scientific universities supplied with students. Typically, Sian has 18 high schools now compared with four a few years ago.

The student shortage is complicated because only one out of every four high school students can qualify for college. Some of the newer universities and institutes in the interior are having a hard time filling their freshmen classes. Northeast University, one of four in Sian, recruits from as far east as Shanghai. Women are found in all courses.

When a high school student is ready for science college, he takes a general exam at the university of his choice, first listing in order of preference the nine specialties that he favors. His marks on the exam determine which department will take him. Once accepted, he will be given all tuition, board, and medical expenses.

For graduate study, the selection is tougher, with plenty of schools but very stiff requirements. Apparently, advanced degrees can also be granted by the Academia's institutes, to their long-time research workers.

- **Getting a Job**—Once the student has his "diploma," comparable to a BS de-



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**New Product Development Manager,
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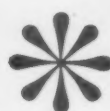
"We've approved its use as a result of this ad."

**District Manager,
Oil Company**



"We were having a problem with clearances of fasteners and saw this ad. I referred the idea to the Purchasing Department and they ordered it."

**Chief Manufacturing Engineer,
Jet Engine and
Missile Component Manufacturer**



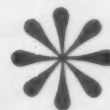
"The ad was very timely because we are . . . having trouble. It certainly looks easy to reach almost impossible spots with that tool, and we have sent for more information and will see their representative soon."

**Assistant Works Engineer,
Electrical Equipment Manufacturer**



"We had been having trouble with motors, and this ad looked like the one we needed. I wrote for figures and information, had it sent directly to our engineers. They will take it from there."

**Treasurer,
Food Processing Company**



"We're running up against a similar problem to the one in the ad . . . looking for something to correct it and prevent its happening again. I intend to get in touch with these people."

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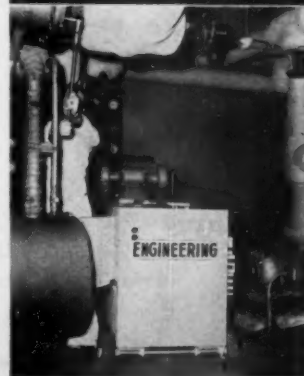
Snap-on was called in and recommended necessary tools and equipment in convenient Roll Cabs for each department. Here is Mr. Schiffrers' report at the end of a year's operations: "The cost of Snap-on equipment was written off within the first year of use by time saved in bringing a fully equipped workshop to every job and avoiding costly shutdowns of our machinery."

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"... job vacancies are filled under a program called 'democracy weighed with centralism' . . ."

STORY starts on p. 183

gree, he generally enters a rigidly channeled world. Job vacancies are listed for all to see, under a program called "democracy weighed with centralism." The graduate turns in a report, saying where and at what he would like to work; then comes a public discussion of the individual's wishes and capacities.

Ultimately, the budding scientist is assigned to a job, at the Academia, or a university, or one of the ministries, or even one of the few factories. Authorities at the Academia say blandly that its "schools have been unusually successful in persuading scientists to go to the right places."

There are some signs that the "successfully" placed scientists are not invariably happy about it. In the cities near Tibet, brand new labs are not enough to keep some scientists from speaking wistfully of their luckier classmates spotted at Peking or near the coast. They feel this isolation especially when they're in applied research.

• **Pick and Shovel**—The Chinese scientists, already granted such considerations as immunity to life in the communes, are beginning to grumble over considerations that they don't get. Especially loud are the yips about having to leave even the most essential work twice a day for physical exercise.

Some scientists are galled by the idea of knocking off to do pick and shovel work alongside the peasants. At Lanchow, Wilson saw a crew of university students turn out for "volunteer" work on a giant ditch-digging job that was being pushed by swarms of workers on a three-shift basis.

Wilson assumed they were science students, and asked university officials if this happened often. The officials lifted polite eyebrows, said no, this sort of work wasn't for scientists. It turned out the students were from the School of Economics.

• **Libraries**—A much brighter side of Chinese scientific education is seen in the libraries found at all the universities and institutes. Wilson believes they compare favorably with all but a handful of scientific libraries in the U.S. and Canada. Typical is the modern gray brick library of the Academia's Institute of Geophysics & Meteorology in Peking; it has at least 400 journals on geophysics and related subjects—all up-to-date. Library indexing of every item is in three alphabets—Chinese, Russian, and Roman.

The Chinese publish only 50 sci-



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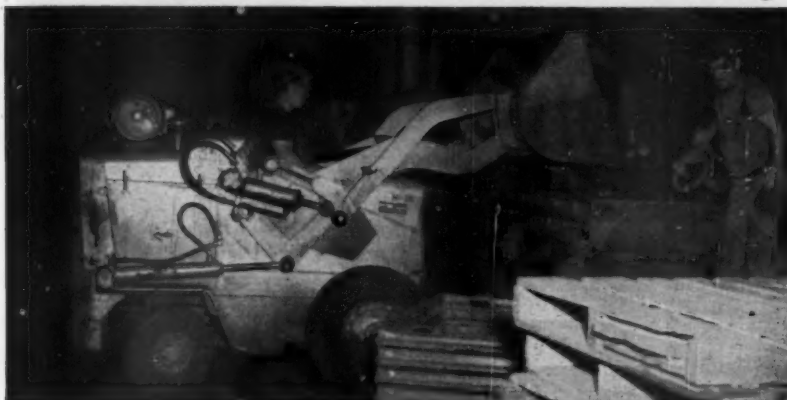
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"... the Chinese scientist can get reference material he needs anytime . . ."

STORY starts on p. 183

tific journals at present, but the number is growing. Any of them—except magazines at the most popular level—can be obtained by subscription in complete or abstract form. To keep their elaborate library system up-to-date, the Chinese do a tremendous amount of multilithing of standard books and texts—their own as well as books from the U.S., Britain, Germany, and Russia.

The important thing is that the Chinese scientist can get any reference material he needs at any time—something that is not always true in the Free World. In the long run, this should spare the Chinese from much needless duplication of research effort.

• **The Human Material**—It's hard to evaluate the quality of the men and women who make up China's scientific army. Many of the older ones had graduate training outside the country. At Sian, near the Mongolian border, Wilson found Ph.D.s from Yale, Caltech, and McGill among the many seismologists studying the regional pattern of earthquakes. At Peking were Dr. Lee Shan-Pang, internationally known author of geology textbooks, and Dr. Chow Kai, a geologist who had studied and traveled widely in the U.S.

In terms of the output of scientific papers—a reliable measure of progress since it means original research—the Red Chinese record looks good. Several years ago, the Chinese produced only 1%-2% of all scientific papers within the Iron Curtain countries; today their share is around 11%.

• **Loneliness**—The very speed of China's scientific progress may be causing unrest among the elite. Flushed with triumph over their feats, they long to communicate man-to-man with foreign specialists in their fields. And, beyond the Iron Curtain, that takes a lot of doing, and brings massive frustration.

Another gnat is nipping the Chinese scientific ego. The Chinese know all about Western science, but Western scientists know very little about them. Very likely the desire to be admired accounts for much of the freedom with which Wilson and a few others have been welcomed to the Chinese scientific community. Communist or no, the Chinese scientist wants to be part of the wide world of his specialty, which means he may run into the Great Wall of isolation that Chinese Communism has raised. **END**



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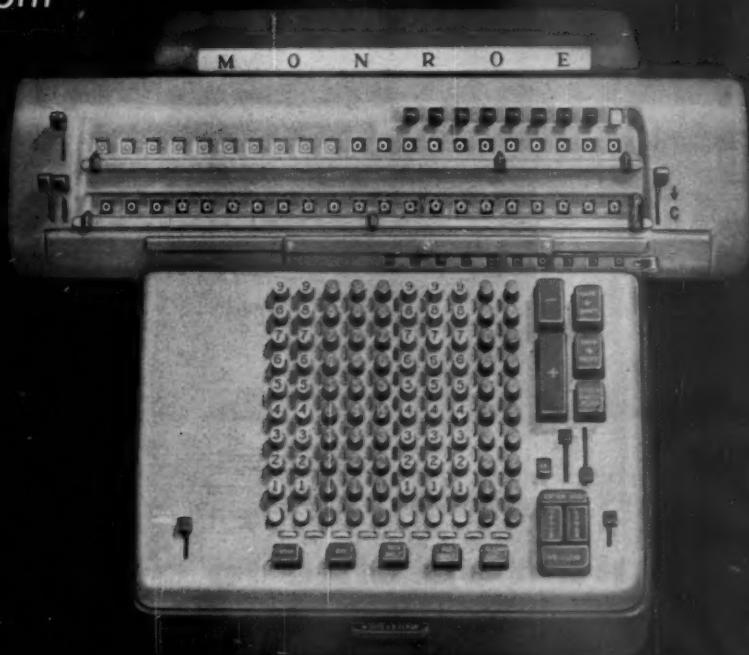
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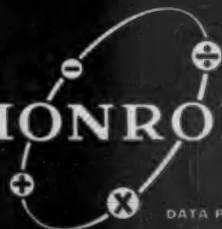
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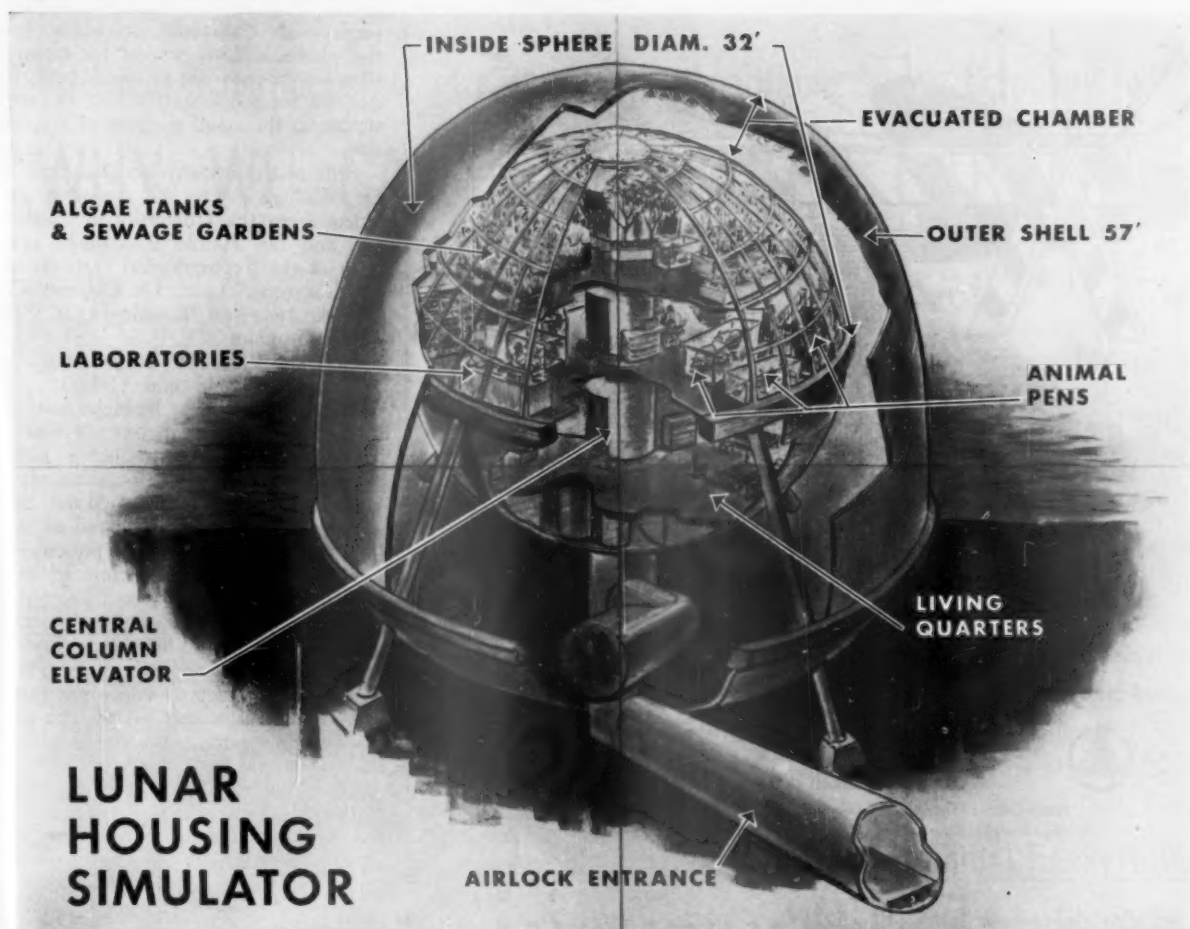
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Waste Disposal in the Space Age

Waste conversion techniques have been developed into a balanced total environment system that can handle the problem of disposing of noxious organic materials from sealed space ships by turning them into reusable products.

When the first scientists land on the moon—probably in the 1960s—they will spend a period of weeks living and working in a lunar ship that might look something like the Martin Co.'s space simulator shown above.

Martin's Denver Div. researchers already have started the engineering for the lunar house, which will be a little universe all its own. Since the vehicle will be completely sealed, a "total environment" simulating conditions on earth will have to be created. Plants and animals will be taken along to carry out the same functions as they do on the earth—the plants will provide oxygen necessary for animal and human life, and the animals will eat the plants and release the carbon dioxide needed to produce more plants.

• **New Kind of Garden**—The plants

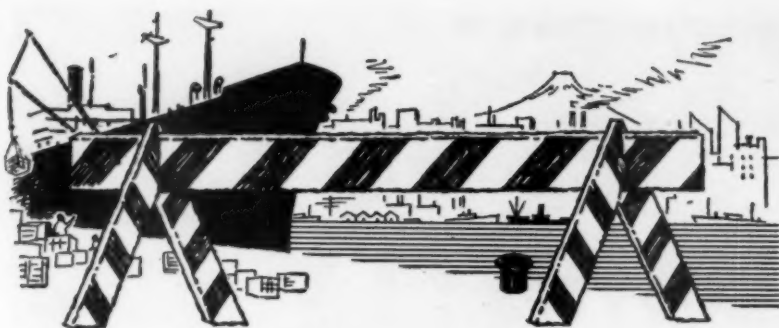
also figure in the sewage gardens—an unusual waste conversion system that was devised especially for use in a space ship—but which also may someday help communities and industry handle their sewage and waste problems more effectively. Since the space ship will be completely sealed, it may not be feasible to discharge waste materials. And they can't be allowed to accumulate in any great quantity, either. So, the only solution was to find a way to convert them into useful, reusable products. In the system envisioned for a lunar ship, the noxious materials will be dumped into tanks of water containing algae and bacteria. Through photosynthesis, the waste solids become algae—which animals can eat—and the waste liquids are changed back into drinkable water.

The process, known as photosynthetic oxygenation, developed out of research begun nine years ago at the University of California. The scientists' initial interest was the improvement of commercial sewage treatment techniques. But, with the dawning of the space age, their interest shifted to working out a complete and balanced system that would eliminate the need for discharging wastes altogether.

• **Early Research**—The earlier research work had led to discovery of methods of converting waste materials to harmless substances that could be dumped into streams without polluting them. Then the researchers started looking for ways to convert the wastes into useful products.

After prolonged experimentation, they were able to convert wastes into high-grade fertilizer; into algae, which have been used experimentally as high-protein fodder for chicks; and into methane, suggesting a new source for gasoline.

Because of their experience with these and other processes, the Uni-



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versity of California scientists felt the photosynthesis process for turning the wastes into algae could best be adapted for a balanced sewage disposal system in the small confines of a space ship.

Bulk of the research was handled by Dr. William J. Oswald, a sanitary engineer from the University of California, and Dr. Harold B. Gotaas, now dean of the Technological Institute at Northwestern. Later, Dr. Clarence G. Golueke, a research biologist at Cal, joined the team.

• **How the Process Works**—Essentially what Drs. Oswald and Golueke did was to apply their biologic science to the long-used ponding system of sewage treatment by introducing algae and bacteria. In ordinary ponding, after some solids have been screened out, the wastes are dumped into a pond of water, and the algae normally present in any water consume and grow on the remaining solids and give up oxygen in the process. But this natural process is a slow one and requires a large pond. But by putting more algae into the water and also bacteria, the whole purification process is speeded up and can use a smaller pond. For the needs of the few people on a space ship, a tank would suffice.

The photosynthetic oxygenation process works like this: The algae supply the bacteria with abundant oxygen, while the bacteria supply the carbon dioxide for the conversion of the solids in the sewage into more algae. Sunlight also is necessary for the algae to grow.

• **Test Results**—After the process had been tested under laboratory-controlled conditions—in which algae and bacteria were grown continuously in human wastes in king-size test tubes—a moderate-scale test was conducted at the sewage treatment plant in the small city of Concord, Calif. And, on the basis of these results, Drs. Oswald and Golueke believe that the process is workable for any city that must treat its sewage and has a large amount of not too expensive land available nearby. They estimate that an American city, on the average, produces about 100 gal. of sewage per person per day. At the present stage of development, their process can handle about 100,000 gal. per day on each acre of pond. Each acre then would take care of 1,000 people. This is theoretical, based on the moderate-sized pond operated at Concord. The scientists hope to reduce the land requirement by as much as one-half as they refine the process.

• **Useful Byproducts**—From time to time, some of the algae has to be removed from the pond, and Drs. Oswald and Golueke accomplished this by centrifugation. After it has been dried out, the algae can be ground into meal. The

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Kellogg President George T. Scharffenberger, (R) explains new Raleigh plant to North Carolina's Businessman Governor, Luther H. Hodges.

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university researchers found that algae is 40% to 50% protein and contains large amounts of Vitamin A. This makes it useful as a feed supplement. Experiments showed that chicks could get one-fifth of their nutritional requirements from the algae meal without harmful effect. Experiments using the algae as feed for other animals still lie ahead. Since the algae is rich in calcium, nitrogen, magnesium, phosphate, and potassium, it also can be used as fertilizer.

While the decontaminated sewage water would not be harmful for human consumption, most persons, understandably, would rather go thirsty. But the purified water might be used for irrigation, though its mineral deficiency makes this application dubious for extended use. It would be ideal, however, for industrial cooling, and could also be used for other industrial purposes where the water has to go through a purification process anyway.

• **Spaceship System**—For a waste disposal system on a space ship, Dr. Oswald estimates that it will be necessary to carry 30 gal. to 40 gal. of water and algae per man. Again, refinement of the process may cut this volume down. But however much the average person might shrink at drinking purified sewage water, it will be completely potable and palatable. Dr. Oswald figures that the space traveler can get by on a gallon of water a week for drinking, but even through careful use will need as much as 10 gal. to 15 gal. a day for other purposes.

The persons aboard a lunar vehicle, however, will be spared the agony of eating algae meal—except possibly in a case of emergency.

The space ship larder will be stocked with high-energy food prepared on earth and packaged in organic materials that could be ground up with the garbage and introduced into the waste conversion system. The algae would be fed to the animals and used as fertilizer for the plants.

Ingenious though it is, the waste conversion system imposes certain limitations on the space vehicle. Since sunlight is a basic ingredient of the process, trips beyond Mars or Venus would be impossible because the sun's rays are too feeble there.

• **Unsatisfactory Alternatives**—Possible alternatives to the photosynthetic oxygenation process for handling waste disposal are (1) rocketing the wastes toward earth to burn up on entry in the atmosphere (2) or discharging them from the vehicle into space where they would become flying submeteors. Simple as these methods sound, they involve engineering problems far more difficult than waste conversion since the space vehicle must remain sealed at all times. **END**

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A Case of Reckless Courage

The Federal Reserve clearly deserves high marks for its courage in deciding last week to raise the discount rate from 2½% to 3%. It's a pity that as much can't be said for its wisdom.

Some traders in the government bond market are outraged because the Fed's sudden move came on the heels of a series of inspired stories and statements that gave the impression that no tightening of credit was in prospect. This may, in fact, have been a bit of dirty pool, but it is of secondary importance. It is not the main function of the Fed to make life easy for bond traders.

A far more justifiable criticism of the Fed's decision is that it bears no relation whatsoever to the current business situation. In raising the discount rate now, the Fed is attempting to fight an inflation that does not exist—except in the forecasts of the money managers. It is acting, then, on the basis of prediction rather than reality.

The money managers appear to have forgotten, but this is precisely what they refused to do in the early stages of the 1957-58 recession. Although the downturn began in the summer or even the late spring, it was late fall before the Fed would switch from tight money to an easier policy. Even with business on the way down, it insisted that it could not try to forecast, that the only way it could operate was to adjust its policy to the existing situation.

And so what is the existing situation now? It certainly is not one that contains any trace of the inflation the Fed declares it must fight. The nation's productive capacity is still not fully utilized. Unemployment is still high. Demand for credit is slack. According to many economists, the threat of runaway inflation has been overdramatized. Prices rose by little more than 1% in 1958, and are likely to rise by no more than that this year.

Under the circumstances, it is plain that the money managers have decided to take the risk of continued high unemployment—and the risk of aborting the whole business recovery—because they hope to head off an inflationary rise of prices sometime in the future.

In making this decision, we strongly suspect, the Fed has been influenced too much by what has been going on in the stock market and not enough by what has been going on in business as a whole.

It is true that the stock market's behavior in the past month or so raises the question of whether Wall Street has cut loose from sanity. The Fed has every reason to be concerned about it. But general credit controls cannot be expected to have any sobering influence on a stock market that is really wound up. Indeed, past experience suggests that

such measures as a rise in the discount rate actually drive the market to greater heights because they excite the fear of inflation instead of dispelling it.

As a result of the Fed's action, we can look for higher interest rates, tighter credit—and a slower pace for a business recovery that still is a long way from putting the economy back where it belongs on its long-term growth trend.

No one can criticize the Fed for wanting to head off inflation. But it's possible to inquire whether the money managers are asking us to pay a high price in terms of birds in the hand for the birds they predict will be in the bush.

Attack on Featherbedding

Over the years, the railroad industry has become a classic example of the way outmoded work rules and "featherbedding" practices can run up costs and hamper operations. Rules developed at a time when 100 miles were a day's journey are still built into the union contracts.

This year, the roads—many of which came close to financial disaster during last year's recession—have decided to have a showdown on featherbedding. They have warned the brotherhoods that any new contracts must provide some relief from "half a billion dollars a year in wholly non-productive make-work. . . ."

The work rules will be subject to bargaining this November. The industry declares that if a strike is necessary to "break . . . these chains to the past," there will be a strike.

However, the industry has a proposal: Railroad brotherhoods and carriers should jointly request Pres. Eisenhower to name a bipartisan committee to study the whole question of work rules, well in advance of a transportation crisis, and to make non-binding recommendations for new work standards, acceptable and beneficial to all.

This is a sound and mature suggestion. Obviously, railroad work rules can't be abolished out of hand. They are the accepted way of life in the industry. The brotherhoods can't and won't consent to let management write its own ticket on rules. But a modernization of them is certainly long overdue.

If carriers and brotherhoods can't settle the rules dispute in bargaining this fall, the issue by law must go to federal fact-finding. It would be far better for the parties to submit rules questions to an impartial panel before the pressures of bargaining build up, and to negotiate later on the basis of recommendations that result from a study of the pros and cons of today's work practices.

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